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# East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS No. 2004



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No. 2004

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#### INTERNATIONAL AFFAIRS

#### CEMA-POLAND INVESTMENT COOPERATION POLICY DISCUSSED

Warsaw SPRAWY MIEDZYNARODOWE in Polish No 1, Jan 80 pp 103-116

[Article by Dr Eugeniusz Zawadzki, chief specialist of the Institute for Socioeconomic Research of the Research-Development Center, Central Housing Construction Cooperative Union]

[Text] International cooperation in the contemporary world is considered to be very important in two fields, namely in the sphere of production and in the scientific-technical sphere. Production cooperation includes specialization exchange and cooperating in production as well as joint investment and production activity. In this context investment problematique viewed internationally appears as a composite part of production cooperation, i.e., with regard to joint investments.

In the process of economic integration within CEMA, the role of investments is a decisive one. This is expressed in the coordinated plan of long-term, many-sided integrating ventures which is being implemented for the first time in the current 5-year plan; the coordinated plan is, above all, a broad plan of projected investments. The coordination of economic systems of particular countries may be successful only in conjunction with the coordination of future production development, based on the coordination of the investments which are the foundation of this development. While it is true that production cooperation within a certain area can be developed among countries on the basis of existing production apparatus, these possibilities are generally limited and linked up with the high costs of adapting existing apparatus to new types of production called for as a result of the division of tasks among particular countries.

During the period of the autonomous development of CEMA countries, investments played a secondary part in integrating processes. As the economies become open the role of investments grows.

A condition for coordinating investments is the coordination (the adaptation or formulation of joint) goals and economic instruments contingent upon the stage of development of socialist countries. The coordination

of investments relates to the development of the institutional-instrumental connections for these plans. What results are real connections in investments, entering into the scope of international coopersison.

By investments are understood economic outlays aiming at the creation or increase of fixed assets. Investments are composed of such outlays as investment goods (machinery, equipment, construction materials and the like), as well as outlays for projects in the design stage, for the purchase of licenses, know-how, geological endeavors and all other outlays on which the implementation of the investment directly depends.

Investment cooperation encompasses the international economic relations which arise during the investment process or throughout its phases. It refers to the joint assumption of investment outlays, participation in the investment venture and sharing in the results gained from the investment. The following come within the scope of cooperation in the field of investments:

- -- the passing on of scientific-technical achievements;
- --assistance in designing plants, in conducting geological-exploratory studies, in preparing qualified cadres;
- -- the supplying of industrial equipment, particularly complete industrial installations, assistance in the assembly and putting into operation of this equipment;
- -- the granting of investment credits;
- --cooperation in the construction of industrial installations, in preparing for the exploitation of natural resources and in meeting needs in the area of raw materials, fuels and electrical energy.<sup>4</sup>

The above concept of investment cooperation has the quality of specifying the variety of investment connections, without characterizing the essence of these connections. Some of these connections may be of a commercial or scientific-technical nature, extending beyond the concept of investment cooperation. 5

Since investment activity is a time-deferred activity--of the outlays, the ventures and then the results--we may speak of the existence of cooperation in this sphere up to the moment of the cessation of all mutual responsibilities connected with activating the investment and the commence-ment of the economic activity which is the object of cooperation. The moment of the cessation of these responsibilities may coincide in time with the moment of the activation of the investment or it may occur at a later time. This is contingent in part on the forms for implementing this cooperation. These forms include the following:

- --cooperation implemented within the framework of direct investments<sup>6</sup>;
- --investment cooperation preceding industrial specialization and cooperation;
- --trilateral investment cooperation (the cooperation of CEMA countries with outside third countries).

Unfortunately, none of the above-mentioned forms of investment cooperation encompassed by CEMA in which Poland has had a share have developed significantly up to the present time; this has a negative effect on the whole picture of economic cooperation with these countries, and especially on production cooperation.

Motives for Undertaking Cooperation in the Sphere of Investments Among Socialist Countries

Since the socioeconomic systems of CEMA countries are similar, Poland's motives for undertaking decisions to develop investment cooperation within CEMA resemble those of other socialist countries.

A basic premise of Poland's cooperation in the sphere of investments is the desire to achieve the greatest economic result possible for the country as well as for remaining cooperating countries taken together. A prime motive of economic efficiency in investment cooperation is the desire for an increase in the productivity of labor of society, i.e., the expending of a minimum of outlays and labor to manufacture a given type of product. Secondary motives are: the need to satisfy specified joint social needs, the high rate of capital absorption of many fields of production which cannot be achieved without investment cooperation, economic and technological complementarity, territorial proximity, the desire to equalize levels of economic development, the desire to grant economic assistance and the like.

Within the scope of such forms of investment cooperation as joint investments, an essential factor underlying the participation of Poland in these investments is their high rate of capital absorption.

Joint investments are undertaken most often in the extraction industry. Raw materials are in short supply. The interest in importing raw materials rose especially between 1973 and 1975 in conjunction with the raw materials crisis. At the same time the extraction and processing of raw materials belongs to the most highly capital-absorptive branch of the economy. Thus, there emerges the motive for the distribution of the consequences of this high rate of capital absorption among interested countries.

In the processing industry the interest of Poland in joint investments is a result of the divergence between the optimal scale of production

and the needs of interested countries. Interest in joint investments in this division of the economy will grow as the following additional factors appear: territorial proximity of interested countries, the high rate of capital absorption of production, the complementarity of countries with regard to the elements of production as well as technological complementarity.

A basic premise of participation in direct investments lies in the benefits derived by the joint initiators. These benefits derive from the varied endowment of CEMA countries with natural riches, a work force and permanent means. Joint endeavors create conditions for overcoming such limitations and also enable an increase in the production run, a reduction in unit costs and the acceleration of technical progress.

Within the scope of such forms of investment cooperation as investment cooperation preceding production specialization and cooperation, a primary motive of their development is the desire for efficient use of capital, technology and work organization to broaden existing production potential and raise the technical level of production apparatus. At the same time, it should be pointed out that the motives underlying such cooperation do not differ significantly from those which influence decisions concerning the development of production specialization and cooperation in general.

Socialist countries are also interested in developing a new form of trilateral connection in the sphere of investments with the participation of at least two partners from socialist countries and from countries of the Third World. Poland is particularly interested in this type of investment cooperation. Among the joint motives for all partners in this type of understanding the following are primary:

--by comparison with other sectors the broader possibilities for merging capital, technology and organization from many regions and the derivation of benefits from the international division of labor:

-- the proximity to sources of raw materials and untapped resources of the work force;

--influence on the development of the Third World through the creation of new markets and the resolution of raw materials problems, as well as the creation of a possibility for structural changes in the economy.

Poland, in turn, by undertaking decisions on investment cooperation with Third World countries may also take into account:

-- the possibility of ensuring the stability of profitable imports through investment deliveries, the export of licenses and know-how as well as the execution of the investment;

-- the possibility for participating in investment ventures on a large scale, too difficult to implement without the combination of efforts.

The motives of Third World countries have a specific character, conditioned in large part by their socioeconomic situation. Their cooperation in investments with CEMA countries can do the following:

- --facilitate the surmounting of numerous barriers to economic growth and in this way help to bring about a change in their role in the international division of labor;
- -- facilitate the implementation of large investments on self-payment terms;
- --strengthen the material premises for the development of international economic order.

Conditions for the Development of Investment Cooperation of Poland with CEMA Countries

If we take into consideration the course of investment processes in Poland and in other socialist countries and their impact on the international investment cooperation of Poland within eastern Europe, the whole body of conditions which have determined the level of development of investment cooperation up to the present time may be divided conventionally into two principal groups, i.e., technical-economic conditions and institutional conditions. The first group is connected with the material side of investment processes in socialist countries, and thus it relates to the development of mutual complementarity of production-technical structures of CEMA countries. The second is connected with the instrumental organizational aspect of investment processes in socialist countries.

#### Technical-Economic Conditions

With regard to each other, economic structures in the international sector may be parallel or complementary. Many intermediate structures occur between these extreme examples. Parallel structures, in the nature of things, make investment cooperation difficult, while complementary economic structures foster it. The coordination of investment projects was partly responsible for opposing the creation of parallel structures. During the years 1950-1975 socialist countries implemented (and continue to implement) substantially convergent goals in the area of investment policy.

The implementation of convergent goals in investment policy, which has occurred nonetheless without their sufficient coordination within CEMA, led to the creation of unintended division-branch parallelism of the socialist countries in the years 1950-1975. The problem of the lack of proper coordination is treated in the following:

"The attempt to coordinate investments...during the 20-year period from 1955-1975 did not produce very far reaching results. The decisive factors limiting the process of coordinating investment plans were the lack of

sufficiently precise instruments equal to the outlays, and, following from this, economic accounting conducted on an international scale, as well as the fact that the goal of the investment decisions which were undertaken was primarily the needs of the internal market."

Other causes of branch parallelism are: autonomous investment policy, excessive investment pressure, a low level of technical progress and low level efficiency in the use of investment means.

In order to overcome the differences dividing the economic structures of particular socialist countries in the post-war period, a large concentration of investment outlays in branches seen as most important from the point of view of long-term strategic developmental goals was necessary. The internal socioeconomic conditions of socialist countries (the necessity for employing reserve production factors--primarily of labor, the similarity in the structure of supply and demand, limited capital possibilities and the like) 10 caused investment policy to develop in an autonomous manner, with a tendency toward the limitation of the possibility of investment cooperation within the compass of CEMA occurring as a secondary phenomenon.

Autonomous investment policy created a situation in which investments were made in similar manches which guaranteed no superiority over the economy of other socialist. The untries with respect to labor productivity, production costs and the like. In this way the multilateral economic development of socialist countries arose, spurring the deconcentration of investment outlays and the stock dispersal of production. The consequences of autonomous investment policy are evident at the present time as well. For example, approximately 160,000 type dimensions of machinery and equipment are produced in Poland, i.e., approximately 40 percent of the world stock. This means production characterized by short runs, high costs and the possibility for progress only in narrow stock segments.

A further consequence of autonomous investment policy is the phenomenon of investment pressure which may be observed in practically all socialist countries. The rate of investment outlays in Poland, for example, during the years 1951-1975 was approximately 4.5-fold that of the United States; during the same period in the USSR investment outlays were approximately 4-fold those of the United States, and in Czechoslovakia, approximately 3-fold. The consequences of investment pressure are directly evident as well in the form of the strained production plans of production enterprises. In the years 1971-1975 investment outlays in Poland exceeded 450 billion zlotys. This phenomenon was accompanied both by the modernization of many fields of the economy and the excessive burden of limited production potential which was further complicated by the broadening and opening of new investment fronts. 12

In the sphere of the efficient use of investment outlays and the fixed assets which are created we must attend to the fact that a number of

priority fields of production in CEMA countries are continuing to develop without sufficient consideration of the future needs of the internal and foreign markets, scientific-technical progress and the proportional development of all the attendant production factors. No mechanism has been created to safeguard the development of these fields against abandonment, on the one hand, and to insure the control of achievements of the scientific-technical revolution, on the other. This is the cause of the rapid technical aging of numerous branches of production, which, at the time of their activation were considered to be modern.

One of the ways to improve this somewhat unfavorable investment situation is the policy which has been undertaken in recent years in Poland and other LEMA countries of ordering investment processes, limiting their scope, and increasing the technical efficiency of existing assets. The development of economic cooperation, including the investment cooperation of Poland within the compass of CEMA, will depend on the depth of these processes and on the structure of the allocation of investment outlays.

#### Institutional-Instrumental Conditions

Among the most important international conditions of this type within the framework of the system of socialist states is the problem of coordinating the investment policy of CEMA countries. An unsatisfactory step in its noordination in the economic practice of socialist states up to the present time is the element of developing a subject-object structure of investment cooperation among CEMA countries, an element which has not been utilized in this regard.

The goal of embarking on coordinating efforts in the sphere of the investment policy of socialist countries at the level of their technical-technological economic structures should be to indicate the most appropriate fields or production for investment cooperation. Such coordination could prevent the eventual danger of the coming into being of unjustifiable branch parallelism in an economic sense for this region.

Another factor conditioning the development of investment cooperation within the compass of CEMA is the lack of precise economic instruments in the area equal to investment outlays.

A primary criterion of investment cooperation is a direct balance-computive accounting. In point of fact, as a rule the directions of investment cooperation issue from sector confrontation of needs and the possibility of satisfying them, most often by means of foreign trade. The debit balance across the international sector of CEMA countries indicates the need for the eventual development of deficit production. Investment processes follow in the wake of these needs. Thus, this criterion of investment policy, as we cut across member countries, does not issue from the need for broader structural transformations of the economy of CEMA countries,

from their long-term policy of distributing production and investment as well as the choice of directions of specialization, but from the technical-altacounting needs of production alone. Computive accounting is applied however, in the evaluation of the efficiency of concrete investment proposals, usually in great detail.

present so-called creeping prices are in effect. These prices cannot present so-called creeping prices are in effect. These prices cannot print an active role either in the process of formulating an investment plan or in the course of developing international exchange. By the same token they cannot be the basis of economic accounting in the selection of variants in investment cooperation. Essentially their role is limited to the passive function of aggregation.

In this way extra-price considerations generally determine the selection of directions of investment cooperation. This state of things limits the solections of investment cooperation, since equivalent criteria, according to which an adequate share in the benefits of the outlays expended could be determined, are lacking. In such a case the easiest position to adopt is a passive one, explaining the situation by the fact that he who does not expend investment outlays is sure not to suffer losses.

This state of things has been responsible and continues to be responsible for the substantial lack of horizontal connections between the production antes at particular countries; national planning commissions hand down account agreements in the area of investment cooperation to production levels in the form of orders.

The Scope and Forms of CEMA-Poland Investment Cooperation

in economic practice up to the present time the direct investments of socialist countries in Poland have occurred in the form of sharing in the Tolish-Hungarian combined capital stock company HALDEX and in the form of a joint Polish-GDR enterprise in Zawiercie.

ine object of the HALDEX operation is the exploitation of hard coal waste dumps in Poland in conjunction with its processing and sale. On the basis of the understanding concluded the Hungarian side provided the necessary technical equipment and executed the technological process, while the Polish side renders the dumps and the remaining means of production accessible. The coal resulting from this cooperation is divided in half between the partners.

A joint spinning enterprise in Zawiercie operates on the basis of the principle of each side sharing half the production outlays and effects, while the operation of the enterprise is based on economic accountability, according to principles adopted in Poland.

The scope of cooperation in the form of direct investments of CEMA countries in Poland thus is of a marginal nature, and operating enterprises play a role which is rather one of pilotage. <sup>13</sup> It should also be noted that Poland does not engage in direct investments with CEMA countries beyond its own territories.

The relatively weak development of investment cooperation in this form has been affected by such factors as:

- -- the limited possibilities in terms of capital and human beings, assigned above all to the development of our own economy, which automatically has limited investments beyond our own borders;
- --disadvantages linked to the economic instruments applied in socialist countries, and especially the lack of convertibility of national currencies and their actual rates;
- -- the relatively slow course of specialization processes in CEMA countries, making the precise evaluation of long-term development of particular economies of socialist states and the allocation of capital difficult;
- -- the lack of broad traditions in the development of this form of investment cooperation in CEMA countries.

By juint investments within the compass of CEMA are understood installations implemented to the end of safeguarding the specific needs of socialist countries, financed in part by the means of the investor country and in part with the assistance of long-term credits granted by interested countries or the International Investment Bank [IIB], most often in exchange for production output or services from these installations. Credit may be granted in the form of convertible currencies or in material form, which amounts to supplying technology, machinery and equipment, construction materials, and the like. If investment credit is provided in the form of convertible currencies, the debtor may purchase the necessary machinery, equipment, technology, and the like on the investment goods market.

Theoretically speaking, joint investments may be conducted in all branches of the economy. In point of fact, however, joint investments are undertaken mainly in socialist countries in those fields, the development of which permits the lowering of certain barriers to economic growth. The development of a raw materials and fuels base, the production of energy and the processing industry are the most important of these fields.

In the case of Poland, the development of a raw materials base on the territory of the Soviet Union and the guarantee of supplies of basic raw materials and other materials for production from this source has awakened great interest. This is not an entirely new form of Poland's cooperation with CEMA nations. The "Przyjazn" ("Friendship") pipeline built years ago

through the joint efforts of interested countries is a well-known example. Over 100 million tons of crude oil from the Soviet Union were supplied to Poland through this pipeline by the end of 1978. Doint investments also take place in the processing industry. The advisability of this type of investment is determined by considerations of the optimal scale of production and the possibilities for achieving concrete results from the given investment. An example of joint investment in the processing sphere is the construction of a cellulose-paper combine in Braila, Romania with the participation of Poland.

A rensequence of the principle that the furdamental goal of joint investments is the procurement of a specific product is the repayment of credit by means of this product. Thus, it is a principle of joint investments undertaken up to the present time that the credits granted must be long-term, and the repayment of the first installment will occur after the full activation of production.

international investment cooperation in the field of raw materials does not meet in full the growing reeds of the Polish economy. In such a situation, the advisability of participating in the continued expansion of a raw materials base on the territory of the Soviet Union and eventually on the territory of other CEMA countries raises no doubts from the material aspect. Intranteeing the country increased supplies of raw materials and other raiserials for production during the 1980's makes the Polish economy independent of the world raw materials market to some degree. On the other hand, it is difficult to evaluate the financial side of our participation in Joint investments. They are highly capital-absorptive, and in conjunction with this the aspect of the efficiency of our participation with regard to the national economy is of some concern. However, the lack of precise enough instruments equal to outlays makes the carrying out of economic accounting on an international scale difficult.

International industrial specialization and cooperation in the majority of cases are preceded by investment cooperation, i.e., it takes place when specialization and cooperation projects cannot be implemented within the framework of existing production capabilities.

International production specialization takes two forms: interbranch and intrabranch. Interbranch production specialization is created mainly as a result of the differences in the area of quantity and quality of natural resources, the level of industrialization, the structure of production and climactic conditions. For these reasons some cooperating countries may relinquish an investment in the production of specific products, while others carry out an investment allocation which enables them to produce these products in quantities to meet their own needs and the needs of cooperating countries. Coordinated investment cooperation preceding international specialization links countries having a complementary production structure.

Fully developed investment cooperation in this area must take into consideration the whole picture of objectively occurring needs of the other CEMA countries. Broadening the international division of labor based on coordinated investment cooperation is an essential direction by overcoming the existing tendencies in the development of particular CEMA countries toward autarkic investment policy and the consequences of these tendencies in the structure of the national economies of these countries.

The interbranch specialization of particular countries which is gradually developing on the basis of CEMA specialization recommendations has produced a situation whereby Poland has concentrated its investment efforts on the production of the following: metal working machines, machines for the chemical and food industries, freight cars, ships and their equipment, electrochemical products, products of the machine and metals industries for universal use, pharmaceuticals and paints.

Within the framework of investment cooperation, Poland imports the following from other countries in this area:

- -- from Bulgaria: electric and internal-combustion trucks, electric motors, ertain farm machinery and certain chemical products;
- -- from Czechoslovakia: rolling mills equipment, forging and molding equipment, machinery for the chemical industry, textile and knitting machines, motorcycles;
- machine and metals industries;
- -- from Hungary: buses, radiotechnical equipment, rolling mill equipment, river craft.

International intrabranch labor cooperation in industry takes the form of investment cooperation within the framework of production specialization and cooperation among CEMA countries participating in given understandings and in their mutual goods exchange.

Within the framework of cooperation, investment cooperation is the delivery of investment goods in conjunction with the development of material production means (machinery, equipment, the technological line, and the like) and the granting of assistance to achieve planned production capacity, and the like accompanied by the long-term mutual delivery of the appropriate products, subassemblies, parts, raw materials, and the like together with maintaining or expanding current production and sale.

Since the main goal of investment cooperation development within the framework of production specialization and cooperation is the growth of labor productivity, this form of investment cooperation plays an essential role in the economic strategy of Poland as well. In 1977 Poland

participated in nearly 100 multilateral specialization and cooperative understandings with CEMA countries and in nearly 280 bilateral understandings with these countries. It is estimated that by the end of 1980 the share of products provided within the framework of these agreements will have reached over 30 percent of Poland's total exports to CEMA countries and over 20 percent of its imports from this source.

Within the scope of multilateral agreements, Poland participates in investment cooperation in the areas of industrial cooperation in automotive production, equipment for the production of glass and ceramic products, complete technological lines for obtaining nitric acid, phosphoric acid and sulfuric acid, construction machinery, rolling bearings, mining equipment, farm machinery, and the like.

Poland's understandings with the Soviet Union concerning the delivery of electromagnetic clutches, road-construction machinery, mining equipment, and completive products for automobiles are an example of bilateral investment cooperation in production cooperation. An agreement with the GDR relates to the delivery of construction and road equipment, secondary equipment, telephone and teletype exchange, electron lamps, industrial apparatus, medical equipment and apparatus. The areas of Poland's cooperation with Hungary encompass products of the automotive industry, the luding completive parts for the FIAT 126P automobile, synthetic textures and pharmaceuticals, among others.

Paland's most important partner in the area of this form of investment cooperation is the Soviet Union. Over 70 percent of our total exports go to this country, and over one-half of the imports implemented within the framework of agreements concerning production specialization and cooperation with CEMA countries.

In recent years interest in the development of investment cooperation between countries with different sociopolitical systems as well as countries with divergent levels of economic development has grown. Under the conditions of detente now occurring within the world it has become evident that Third World countries and Western countries can play an important role in the development of Poland's investment cooperation with CEMA countries, to the extent that they are involved in international investment cooperation on the basis of partnership and sharing in the benefits resulting from this partnership.

Trilateral investment cooperation is the expansion of earlier forms of international cooperation in intraregional and interregional investment cooperation of CEMA countries. Such cooperation is based on the utilization of the local potential of production factors, primarily raw materials, and, as a rule, necessitates large capital outlays and a lengthy amortization period. This predetermines the long-term character of trilateral connections in investment and compensatory processes, which are often

implemented on the basis of compensation in kind. Such compensation, however, may be used to good effect, on the basis of understandings which have continued for many years, to the end of importing necessary raw materials, semifinished products, and the like.

The objective scope of trilateral investment cooperation may be broader than that of bilateral connections. Up to the present time investment enterprises in conjunction with the construction of complte industrial installations in Third World countries have been a priority. In this type of investment cooperation one of the partners usually acts as the general supplier and contractor, and the others as the subcontractors of the necessary equipment or services conforming in terms of parameters and timetables to the requirements of the main contractor.

Polish-Soviet connections in the field of the supply and assembly of industrial installations in outside third markets (especially in certain developing countries such as Libya and Algeria), being installations erected on the bases of "turnkey" principles, are an example of such cooperation. The construction of industrial installations outside our borders creates broad possibilities for cooperation between contracting parties in the course of the exploitation of the installations as well.

Another example of this type of investment cooperation, in this case on the territory of western countries, is the participation of Poland and the Soviet Union, among other nations, in bidding on the construction of a gas pipeline in Iran.

In its investment cooperation with socialist countries in outside world markets Poland specializes mainly in the export of production potential which demands high qualifications (construction-erection labor, and the like).

The Development of Investment Cooperation in the 1970's

In the latter part of the 1960's the formation of a multilateral concept of development of CEMA countries was initiated. Work on this concept was completed with the adoption of the "Comprehensive Program for Socialist Integration of the CEMA Member-Countries." The Comprehensive Program took into account prior experiences in the development of the international division of labor and thereupon created new foundations for investment cooperation as well.

This is evident above all in the coordination of investment projects. The coordination of long-term investment projects within the framework of directive programs encompasses the primary directions of socioeconomic development, which include: the development of a fuel-energy base and a raw materials base for metallurgy and the development of the chemical and machine industries, and the like. The coordination of 5-year investment plans takes in more detailed problems; these are specified in 5-year trade, specialization and cooperation agreements.

Further changes consist primarily of improving methods of planning, management and organization of investment cooperation. In the sphere of planning these changes include the broadening of planning horizons from intermediate-term programs to long-term and trend programs, among other things. This approach enables us to become aware of relative differences occurring in labor productivity from the initial period from the viewpoint of final effects, i.e., those resulting from long-term investment cooperation.

Coordination in the area of investment cooperation takes place before the investment plans of particular countries are approved, which means that the results of investment cooperation are reflected in national investment plans; this is in contrast to the coordination of investment cooperation from the previous period, which took place in general after decisions concerning the plans of socioeconomic development of particular countries had already been made.

Another basic innovation is the execution of special chapters in national plans devoted to problems issuing in part from investment cooperation to the end of protecting the obligations which have been taken on.

The criteria of economic selection in the area of investment cooperation across broad and mean horizons of time are based on direct accounting. Requirements relating to investment cooperation in the national sector are implemented by enterprises in an obligatory manner (in the form of orders).

In implementing the recommendations of the Comprehensive Program, Poland and other CEMA countries take part in many joint investment programs in the area of joint investments to the end of serving growing needs for fuel, raw materials and other production materials. To cite an example, Poland cooperated in the construction of the Orenburg gas basin, gas processing plant and gas pipeline.

The Kimgajewski asbestos combine is being constructed in the Orenburg district with the participation of Poland, among other countries. When the first stage of construction is put into operation, the Soviet Union will supply these countries with 177,000 tons of asbestos and cement products annually.  $^{18}$ 

Under similar conditions, Poland and other socialist countries (Bulgaria, the GDR, Romania and Hungary) are cooperating in the construction of a cellulose combine in Ust-Ilimsk (the Irkutsk district). As compensation for their share, all the countries participating in these investments are assured of a supply of cellulose in the amount of 205,000 tons annually over a period of 12 years from the time of activation of the installations. For the years 1976-1980, 28 such joint investment enterprises were coordinated within the compass of CEMA, for a combined total of 40 billion foreign exchange zlotys. Half of this sum goes to the Soviet Union.
Poland's share amounts to approximately 5 billion foreign exchange zlotys.

Perspectives of the Development of Cooperation in the Sphere of Investments

It is generally thought that the 1980's in Poland should be characterized by moderate growth in industrial production and the national income. 19 This is the result of the necessity to repay negotiated credits, and, in conjunction with this, the limited possibilities of importing raw materials and investment goods from Western countries. This will hamper new investments, since the national income is encumbered by the repayment of credits and there is great involvement in already undertaken investments.

For the first 5-year period of the coming decade, it is projected that investment policy of necessity should concentrate on the completion of investments undertaken during the current 5-year plan. Putting them into operation should lead to the growth of new production capabilities. The amount of this increase and its structure will not resolve completely our difficulties up to the present time in the area of balancing foreign trade and our supply problems on the domestic market, as is believed. It follows that the elimination of the disproportions occurring during the present 5-year plan and the growth of the national income will probably take place without an increase of investment outlays to this end. By the end of the first 5-year period, we may expect the completion of investments initiated during the present 5-year plan. This will enable the undertaking of a broader investment program for preparing production potential for the next 5-year plan, and thus the import rate of investment goods and raw materials will increase, and the foundation will be laid for the development of investment cooperation with CEMA countries in the second half of the decade.

Taking under consideration the fact that a basic factor limiting the possibilities for the growth of industrial production during the coming 5-year plan and most certainly during the period following is our supply of such raw materials and fuels as crude, petroleum products, gas, chemical products and ferruginous raw materials, in the continued improvement of living conditions which is planned for our society, there should be an increase in outlays in the fuel-raw materials complex, the foods complex and the social and technical infrastructure, along with the stabilization of the general investment rate in industry at the present level. The above goals of investment policy will surely affect Poland's investment cooperation strategy with CEMA countries. Thus we ought to anticipate a rather low growth rate of industrial cooperation, and a higher growth rate in the fuel-raw materials complex within the framework of the market production complex.

It is estimated that deliveries of fuels and raw materials from the Soviet Union, within the framework of present investment cooperation and the agreements which have been concluded on this basis, can meet approximately 40 percent of our additional needs in this area. This would necessitate the import of another 60 percent of raw materials and fuels from the West

and the south, thus increasing Poland's indebtedness. In conjunction with the above we should develop investment cooperation in the area of extracting and processing raw materials and fuels, particularly with the Soviet Union, and we should also make great progress during the next decade in specializing Polish industry from the viewpoint of foreign sale. This should enable the rapid development of large-scale production in the areas of equipment for prospecting for and exploiting deposits of crude and gas on shelves, equipment for open pit mines, equipment and machinery for mining and for the deep extraction of crude, equipment for nuclear power plants, complete technological lines for the chemical and food industries, for ships, metallurgy and coke engineering, construction machinery, and the like. The approval of the intense specialization of the Polish economy along the main strategic line of the investment policy of the country in the coming decade will make possible the development of investment cooperation with the USSR and other CEMA countries to the end of overcoming the fundamental barriers to our economic development.

In addition to specializing in production in the fuel-raw materials complex, we should aim at establishing investment-production cooperation in certain other chosen sectors, particularly in those in which Poland already has a strong position among socialist countries.

At the 20th CEMA session a proposal was made to elaborate 5 so-called tread programs of cooperation. 20 These relate to the construction of a raw materials and energy base, to the construction of machinery and the production of consumer items, market products and articles of transport. By 1990 within the CEMA region a network of nuclear power plants will arise with a combined force of 37 million kw.

An important occurrence in the strengthening of the energy base of Poland and other socialist countries is an understanding, signed during deliberations of the 89th session of the Executive Committee of CEMA in March 1979, concerning the share of Poland in new joint investments which have as a goal the development of the energy potential of these countries.

One of these understandings refers to the participation of our country in the construction of the Khmelnitskiy Atomic Power Plant on the territory of the USSR, and another, to our participation in the construction of a 750 kv power line connecting this power plant with Rzeszow.

The 1000 mw of power which Poland will receive when the Khmelnitskiy Atomic Power Plant reaches its full operational capacity will be a very important element of the country's energy balance, especially in consideration of the fact that this electrical energy will be supplied to the southeastern part of Poland, where there is a serious energy shortage.

Supplies of energy from the installation constructed by means of joint efforts will enable us to save from 80 to 120 million tons of coal over

over a 20-30 year period, otherwise used by thermal power plants. This has important economic significance as well with regard in alleviating the rail transport situation, which is one of our developmental barriers.

Agreements are also being drawn up concerning the production of nuclear equipment, our share in the construction of fodder yeast factories, citric acid plants, and the like. An agreement of great importance provides for the establishment on the territory of the USSR of facilities for producing energy-consuming chemical products such as methanol, ammonia and polyethylene, which the USSR will supply to its partners in return for less energy-consuming products. The USSR, with the investment assistance of CEMA countries, will broaden its cultivation of cotton to serve their needs as well.

Both at present and in the future the export of construction services to CEMA countries will play a very important role. In 1978, the sale value of these services reached nearly 1.5 billion foreign exchange zlotys (in 1968 their value was 90 million foreign exchange zlotys), of which 77 percent are used by socialist countries. I Presently the recipient of the largest volume of the export of these services is Czechoslovakia. The GDR is in the second place, and Hungary is third. Poland exports construction services to the USSR as well within the framework of investment cooperation.

Aside from such already implemented contracts as the construction of power plants at Prunerov and Janschwalde and a sugar plant in Cuba, the construction of an atomic power plant in Hungary will be undertaken in the future. A contract has also been signed with Hungary for the construction of a sugar plant for producing corn syrup. It will be constructed according to Austrian technology.

Investment cooperation with socialist countries is an essential determinant of the place of Poland in the international division of labor, as well as the principal expression of our participation in the economic integration of CEMA countries. Poland's investment cooperation with CEMA countries can create a suitable basis for cooperation with countries having distinct socioeconomic systems as well.

#### FOOTNOTES

- See P. Bozyk, "Wspolpraca gospodarcza krajow RWPG" [Economic Cooperation Among CEMA Countries], Warsaw 1976, p 125.
- See Z. Knyziak, W. Lissowski, "Ekonomika i programowanie inwestycji przemyslowych" [The Economics and Programmatics of Industrial Investments], Warsaw 1964, p 30.

- 3. See Z. Knyziak, W. Lissowski, op. cit., pp 16-17.
- 4. See "Fundamental Principles of the International Socialist Division of Labor" in "Rada Wzajemnej Pomocy Gospodarczej, wybor materialow i dokumentow" [Council of Mutual Economic Assistance, Selection of Materials and Documents], Warsaw 1964, p 177.
- 5. The influx of investment goods, both material (machinery, equipment, and the like) and nonmaterial (patents, licenses, and the like) create the foundation of investment cooperation, when, after the signing of a contract between a supplier and investor, continued long-term contacts and cooperation occur. On the other hand, when the delivery of investment goods is not accompanied by any formal obligations and consequences for both sides in the future, it is said that the operation is of a trade nature.
- 6. By direct investments of a given country are understood its assets which take on the form of material goods beyond its borders. In the practice of CEMA countries the large majority of direct investments are capital outlays connected with the creation or construction of joint enterprises. See J. Sulmicki, "Transfer postepu naukowotechnicznego przez przedsiebiorstwa miedzynarodowe a długookresowe zmiany w miedzynarodowym podziale pracy" [The Transfer of Scientifictechnical Progress by means of International Enterprises and Longterm Changes in the International Division of Labor], Higher School of Planning and Statistics, Monographs and Papers, No 65, Warsaw 1978, p 45.
- 7. See J. Nykryn, "Miedzynarodowa kooperacja przemyslowa" [International Industrial Cooperation], Warsaw 1975, pp 283-284.
- 8. Economic structures, particularly industrial structures are parallel with reference to one another if their identically-named branches (e.g., the machine industry within the compass of CEMA) produce products with identical or similar characteristics of use in the utilization of different or identical techniques or technologies.
- 9. See J. Kleer, "Integracja gospodarcza w RWPG" [Economic Integration within CEMA], Warsaw 1978, p 98.
- 10. See P. Bozyk, op cit., pp 51-57.
- 11. J. Moscicki, "Inwestycje w rozwoju gospodarczym krajow RWPG. Wybane Informacje Tematyczne CINTE" [Investments in the Economic Development of CEMA Countries. Selected Thematic Material of CINTE. [Expansion unknown]], 1977, No 25.
- K. Seconski, "Program usprawienia działalności inwestycyjnej.
   Zagadnienia i Materialy" [A Program of Efficient Investment Activity.
   Problems and Materials], 1975, No 8.

- 13. This problem is also emphasized by P. Bizyk and M Cuzek in "Teoria integracji socjalistycznej" [Theory of Socialist Integration], Warsaw 1977, p 303.
- S. Gora, Z, Knyziak, "Miedzynarodowa specjalizacja produkcji krajow RWPG" [International Production Specialization of CEMA Countries], Warsaw, 1974.
- 15. A. Detyna, "Mutual Deliveries of Complete Industrial Installations," RYNKI ZAGRANICZNE, 1978, No 120.
- 16. See I Cieniuch, B. Durka, "The Evolution of Poland's Economic Cooperation with CEMA Countries," SPRAWY MIEDZYNARODOWE, 1979, No 4.
- 17. "Kompleksowy program poglebiania i doskonalenia wspolpracy i rozwoju socjalistycznej integracji krajow członkowskich RWPG" [A Comprehensive Program for Intensifying and Improving Cooperation and Development of Socialist Integration between CEMA Member Countries], Warsaw 1971.
- 18. See A. Detyna, "Joint Investments Within CEMA," RYNKI ZAGRANICZNE, 1978, No 111.
- 19. See the Central Committee Thesis for the VIII PZPR Congress, Warsaw 1979.
- J. Kowalewski, "Long-Term Trend Programs of Cooperation Among CEMA Countries," SPRAWY MIEDZYNARODOWE, 1978, No 9.
- 21. See ZYCIE GOSPODARCZE, 1979, No 10.

8536

CSO: 2600

#### MINISTRY'S EFFORTS TO HELP LAGGING ENTERPRISES CRITICIZED

Tirana ZERI I POPULLIT in Albanian 18 Mar 80 p 2

[Article by Leonidha Mertiri]

[Excerpts] Some 12 of the 35 enterprises under the jurisdiction of the Ministry of Construction did not fulfill their plans for 1979. In the month of January, this number increased. Last year, the volume of constructions was only 92 percent of the plan. The most noticeable short-comings were in the production of cement, bricks, etc.

Naturally, the reasons for these shortfalls must be sought, in the first place, in defects in the work of the basic party organizations and of the management of these enterprises and in the insufficient assistance of the party committees and the executive committees [of the peoples councils] in the respective districts. But we should not stop here because there is another problem—in the work of the party organization of the Ministry of Construction which is responsible for the good operation of the sectors under the ministry, not simply within the walls of the ministry, but throughout the country.

The functions and duties of the ministry are great. The terrain of judgment and of management activity of the basic organization is also broad. There are no links of this ministry without communists. Through them, the ministry carries on its entire activity. But how does the work of these communists and of other workers in the apparatus radiate out to the grassroots? The secretary of the party organization, Aleko Stillo says: "The teams went out. We had meetings and talked about economic problems and made decisions but some enterprises are not changing their ways." It is true that the comrades went to the grassroots and that the problems were examined in the party organization. But if you do not see things as they are seen at the grassroots, then your effort is far from what is desired. For example, a group of comrades from the ministry went to construction enterprises in Tepelene, Gjirokaster, Permet and Sarande enterprises with shortfalls in the fulfillment of the plan, in order to help them and bring them out of their backward state. But it was just a whirlwind visit. Four districts were visited in 6 days. It is understandable that in such a short time you cannot examine problems deeply and give the necessary assistance in overcoming shortcomings. After the visits, the construction enterprises in Permet and Girokaster did not fulfill their plans for February.

Some construction enterprises continue to fall to fulfill their plans. Cars with ministry workers come and go at these enterprises. Also, the gasoline plan was exceeded for the past year (1). And the situation remains the same. It is true that trips are being made to the grassroots but it is dangerous to measure the work formally by the number of days that the workers go to the grassroots as long as the concrete results of this activity are lacking. Time after time, comrades from the ministry, even deputy ministers have gone to the "21 December" enterprise. Last year, it was a group of comrades with deputy minister Serafin Kuke. But they did not spend enough time on the problems. No meetings were held with workers and with specialists to consult them and hear their opinions on the shortcomings which were brought out. No conclusion was reached and no duties were assigned. This is not concrete assistance and it does not help the grassroots. It has a negative influence on the work of the cadres from the ministry and the cadres at the grassroots. This kind of activity is bureaucratic and meaningless.

It is the duty of the party organization in the ministry, by being directly concerned with the work of the enterprises under the ministry's jurisdiction, to motivate all workers and to give better help to the grassroots organization in rescuing enterprises from backwardness. The grassroots should not say "the comrades from the ministry will be coming to us" and wait around for their arrival.

CSO: 2100

#### DEVELOPMENT OF PAPER INDUSTRY REVIEWED

Tirana BASHKIMI in Albanian 17 Mar 80 pp 1, 2

[Article by Kico Trebicka, specialist in the Ministry of Industry and Mines: "The Paper Industry and Its Prospects"]

[Excerpts] The paper industry in Albania is a new branch of industry. The wrapping paper factory for the production of cement sacks was the first plant. This factory began operation in 1965 in Shkoder. The same year, the first printing paper factory began operations in Kavaje. One year later, the factory for the production of paper and cardboard wrappings from wheat straw went into operation in Lushnje. In 1971 the factory for the production of corrugated wrappings from paper and textile scraps was built in Tirana. This factory is of great economic importance because its products are used as substitutes for wood.

In 1972 Paper Factory No 2 was built in Shkoder, for the production of paper bags by means of a technique which was more progressive than that of the existing factory. In 1978 the paper factory in Lezhe was put into operation. It supplies paper to the mimeograph printing combine and to other printing presses in our country. In this factory, the newsprint for the central press was produced for the first time. Also, Paper Factory No 2 of the "M. Mame" wood combine has begun operations. This factory was built while keeping in mind the recommendation that paper and textile scraps should be substituted for wood which is scarce and that these scraps should be used for manufacturing cardboard boxes for the packaging of various industrial products and for our export products. The party has issued the directive, time after time, that the production of paper and cardboard should be further increased so that the quantity imported would be reduced from year to year. On the basis of these recommendations, the production capacities of all factories have increased and have been exceeded. As a result of the implementation of the initiatives of the working collectives of the paper industry, new articles, needed by the economy, are being produced. Let us mention the buckled cardboard and the bituminous tiles which the Lushnje paper factory produces. construction and hydroinsulation materials used in the construction and agricultural sectors.

The paper factories are making studies in regard to the increasing of the range of paper and cardboard varieties and the improvement of their quality. Experiments have been made on different types of cardboard and on the production of azolite paper. Studies have been made in regard to the production of craft paper from wood shavings and from remnants of beech and pine trees, the covering of corrugated cardboard boxes, etc. Our workers and specialists have designed lines for the production of sulfite pulp and of lignosulfates. Also, in cooperation with the workers in the Ballsh petroleum refinery, they are working to domestically produce sodium sulfate, a chemical which is essential for the paper industry. With the workers in the geology and chemistry sectors they are carrying out studies on the industrial use of talc ore for use in the paper industry. Also, as a result of the many studies of our scientific institutes and bases, almost all the chemicals needed by the paper industry will soon be produced in the country.

Good work has been done for the improvement of the quality of the products. Many related problems have been solved such as the improvement of the quality of paper bags and cardboard boxes used for export and of various types of printing paper, etc.

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#### SHORTCOMINGS IN ACTIVITY OF HIGHER TYPE AGRICULTURAL COOPERATIVES

Tirana ZERI I POPULLIT in Albanian 21 Feb 80 p 2

[Article by Nikollaq Janko, director of the Directorate of Agricultural Cooperatives in the Ministry of Agriculture: "What Did the Analysis in the Higher Type Agricultural Cooperatives Show?"]

[Excerpts] The analysis of economic-financial activity during the past year in the higher type agricultural cooperatives revealed—in addition to some achievements—shortcomings and weaknesses of a subjective nature whose elimination is an important requirement for the achievement of the planned tasks. A detailed, responsible analysis, with comparisons between brigades and sectors of the same unit or among units with comparable conditions, where the opinion of the cooperative members is broadly enlisted, is essential in order to pinpoint reserves and possibilities and to better schedule future work. And it must be said that the reserves and possibilities are very great.

Examining the results of the past year in the higher type agricultural cooperatives, one sees that some cooperatives have fulfilled the plan and have made progress in the development of agricultural and livestock production. At the same time, some others, such as the Jub-Sukth and Shijak cooperatives in Durres, the Gorre and Bubullime cooperatives in Lushnje, the Novosele cooperative in Vlore and the Agim cooperative in Fier are completing the year with accentuated shortfalls in agricultural products and in planned incomes. The causes are subjective, connected with obvious faults and shortcomings in the organization and direction of production, from the leadership of the cooperative down to the brigade staffs.

Some cooperatives have had shortfalls in agricultural yields as a result of failure to implement scientific discipline in production. The managers and specialists are responsible for these shortcomings.

During the past year, some higher type agricultural cooperatives did not properly utilize their resources in the livestock area. This happened because the management organs of these cooperatives have not given sufficient attention to eliminating backwardness in this sector. Radical results in livestock production can be achieved only if the fodder problem is taken seriously. In some cooperatives in Durres and Kruje districts,

the planned areas have not been planted to first crop fodder plants or only 50 to 60 percent of the required area has been planted to second crop fodder plants. Despite the fact that little time and fertilizer is invested in fodder crops and the level of mechanization is low for these crops, some cooperatives get only 30 quintals of fodder per hectare while there are possibilities of getting double that figure or even more, as the experience of outstanding units shows.

Last year, the higher type agricultural cooperatives registered some improvements in regard to the effectiveness of the expenditures made. For each 100 leks of material expenditures last year, about 7 percent more income was realized than in 1978. However, in some cooperatives this situation is still unsatisfactory.

The managers of these agricultural cooperatives should improve their work methods and styles, increase their demands for accountability and make each cadre and specialist responsible for the fulfillment of the planned economic-financial indicators. The agricultural sections of the districts should give skilled assistance to these cooperatives in order to perfect the management and organization of production. The Directorate of [Agricultural] Cooperatives in the Ministry of Agriculture, on the basis of the party directives for these cooperatives, which represent a higher scale of association of group property and on the basis of experience amassed up to now, should give greater attention to solving the problems of these cooperatives in the field of the organization and management of production, finance, the implementation of cooperative democracy, etc.

CSO: 2100

#### RECORD HIGH GRAIN YIELDS IN SILISTRA OKRUG EXAMINED

Sofia OTECHESTVEN FRONT in Bulgarian 26 Mar 80 p 2

[Article by Metodi Tanev, observer of OTECHESTVEN FRONT for domestic political questions: "The Silistra Grain of Bulgaria"]

[Text] In a sober evaluation of the results of last year's work, from all the activities during the Seventh Five-Year Plan, as well as in the tasks outlined for this year, everywhere one can feel the presence of the decisions of the March Plenum of the BCP Central Committee and the ideas of Comrade Todor Zhivkov on an economic approach, on the new economic mechanism, and on scientific and technical progress.

With a 4 percent reduction in area, Silistra Okrug during the 4 years of the Seventh Five-Year Plan has produced the same amount of grain from the basic cereal crops as was produced in the entire Sixth Five-Year Plan. The average annual increase rate has been 20 percent, and for the record year of 1979, 41 percent. The average yield of the cereal crops of wheat, barley, corn, soya, sunflower and beans during the Sixth Five-Year Plan was 380 kg per decare, and during the 4 years of the Seventh Five-Year Plan this has reached 471 kg, and in 1979, 596 kg per decare.

The year 1979 was most favorable in terms of atmospheric conditions. I do not intend to burden down my article with many figures and facts, but it seems to me that certain data in essence represent the correct and precise response to the complicated and difficult tasks which have been carried out with great effort. The average per-decare wheat yield is 468 kg, for barley it is 482 kg, for corn 752 kg, for sunflower 216 kg, and for soya 200 kg. Some 6,700 tons of grain were produced above the plan. Silistra Okrug has entered the last year of the Seventh Five-Year Plan with an advance of 45,000 tons of grain destined for the state, and with secure livestock feed.

The industrial production brigade in the village of Glavinitsa led by Georgi Georgiev who is presently the chairman of the branch farm on 10,600 decares of nonirrigated land obtained an average of 1,023 kg of corn and 504 kg of wheat per decare. The 8 branch farms and the 22 industrial production brigades obtained over 500 kg of wheat per decare. Incidentally the figures

of 500, 600, 700, 800 and 1,000 are not a rarity in the production of either wheat, barley or corn.

The detachment of order winners has increased. The tractor operator in the industrial production brigade in Iskra, Georgi Zakhariev, has received the title Hero of Socialist Labor, and orders have been presented to Nikola hoyanov of Nova Cherna, the Komsomol youth brigade Petimata ot RMS in Iskra, Iliya Georgiev from Flavinitsa, Nazmi Akhmedov from Iskra, Vulcho Vasilev from Dulovo, Petur Petrov from Kelipetrove, Safet Akhmedov from Iskra, Ilioyan Georgiev from Aydemir, Elena Dimitrova from Ishirkovo, and Khristo Atanasov from Alfatar.

One could say a great deal of how the "production--science--production" chain operated continuously in applying the interrelated three factors (biological, technological and economic), of the dynamic varietal structure, the soil sciences, the fertilizing of the soil, the tilling of the land, if the tabulated forms, of the few but highly productive East German combines, and of a number of other innovations. Engineering and introduction activities covered all the essential aspects and moments. The results were highest where the work was carried out according to the requirements of science. Incidentally many of the persons with whom I spoke mentioned presisely this.

rustur agroindustrial complex [APK]:

When one thinks in a new manner and works in a new manner, success comes quite naturally. Last year a scientific spirit was strongly present. And in the past corn production was 'shown traditional respect,' but the time will come when it is not enough for us to rely solely on traditions and wills. At present the question is not several percent more but rather enveral fold more. Our approach is not only to maintain our affection for own, wheat and other cereals, but also to further it. Under the leadership of the okrug party committee, this will be carried out."

rgl Georgiev, specialist and former leader of the industrial production rigade, and since the beginning of the year, chairman of the branch farm the village of Glavinitsa:

Farticular, and, I would say, exceptional interest has been shown and continues to be shown in what the brigade has achieved, that is, 1,023 kg of me grain as an average per decare from 10,600 decares of nonirrigated land. There are a number of factors and circumstances which have made the victory sible. We have in mind the complete unity of action between practice actions science, the brigade organization of labor and internal economic action that it is so sience. The and is made strong by our labor, but our labor is also made strong by the land. We return the care and love in kind. For me this is so simple and

Also of interest was my talk with the leader of the youth industrial production brigade in the village of Iskra, at the Sitovo branch farm, Mekhmed Saliev:

"Virtually all the equipment operators from our brigade are young. Only two or three are beyond the age of youth. Do they have experience? No, but they have creative daring, an inner fire, a feeling and attitude toward discipline, be it labor or production, a feeling of duty and responsibility to oneself, to their fellow comrades, to the land where they were born, which we are working and which feeds us, and to the motherland. From 10,000 decares of unirrigated land we have received 940 kg of corn grain per decare! The land is ready to show us even greater recompense. It depends on us."

This "it depends on us" is also the position held this year by the leaders and farmers in Silistra Okrug. One is strongly impressed by the dissatisfaction of the Silistra people with what was not achieved in one or another area. The conclusions from the various comparisons have been written out in black and white. The differences in the yields of the leaders and the followers amount to 100, 200 and more kilograms per decare. But the conditions and opportunities were the same or almost the same. To put it differently, the question is of the place, role and purpose of the subjective factor, that is, of the human worker, the farmer.

Silistra Okrug has set as its goal the highest possible utilization of the biological potential of the crops, of the land, and so forth. For example, in 1979, in wheat production the percentage of the utilization of the potential was 79.8 percent. But on individual branch farms, for example, in the village of Sitovo and Nova Cherna, the percentage was 93.6 percent.

There already is a basis for comparison with the world famous producers of wheat, corn, sunflower, soya, and white beans, as well as with the highest achievements of the USSR, the GDR, the CSSR, Hungary, Yugoslavia, Romania, New Zealand and the United States....

In 1978, in England the average wheat yield per decare was 549 kg on an area of 12 million decares. But farmer Cooper achieved an average yield of 1,248 kg of wheat on an area of 4,800 decares. And our own achievements are close to this! At the Institute for Wheat and Sunflower, near General Toshevo yields are obtained from 504 to 602 kg per decare for the wheat varieties planted in Silistra Okrug. On the varietal field at the village of Sitovo, the average wheat yield is from 543 to 596 kg. We are speaking not of one but rather of several "queens" of the fields, corn, wheat and soya.... The Silistra corn yield is close to the top world achievement. We have in mind New Zealand where the average yield during the period of 1975-1978 was between 712 and 827 kg. In Silistra Okrug, in 1979 the average yield was 752 kg. But the data of the scientific institutions and the varietal fields indicate that last year the average yield of the corn hybrids grown under irrigated conditions was from 919 to 1,178 kg. Consequently, the obtained average yield of corn grain is a result of realizing 75 percent of the biological potential of the hybrids.

In the Silistra area the average soya yield is 200 kg per decare, but on the branch farm in Kalipetrovo it is 258 kg, 231 kg in Nova Cherna and 215 kg in Okorsh. The average yield is 19 kg more than the yield in Veliko Turnovo Okrug, and 15 kg more than the yield in Ruse Okrug. But the average yield in Italy is 355 kg per decare, 300 kg in New Zealand, and 227 kg in Argentina. Certainly one must consider the soil, climatic and other conditions. But it is indisputable that we are equaling the world achievements and indicators!

The agricultural workers and specialists in Silistra Okrug are fully aware that it is important to increase the yields, but at the same time it is equally important to reduce the material expenditures. Economic accountability is the measure! But with the achieved increase in the per decare grain yield of 9.3 percent, material expenditures have risen by 26.8 percent. On the branch farms in Glavinitsa, Ishirkovo and Nova Cherna the material expenditures have been reduced, and consequently the production costs have declined. The Silistra workers do not conceal that raised grain has been lost, the problem of drying and storing the grain is acute and unsolved, there is an acute need to highly productive combines, grain dryers and warehouses, and earlier-ripening varieties are needed. If live and embodied labor had not been lost, the achievements of Silistra Okrug would have been even higher.

ice producing a ton of grain, the Silistra workers spend 15.2 hours for sheat and 18.7 for corn. But in Belitsa, 7.2 hours are spent for one ton all wheat, 11 in Sitovo, and 11.4 in Ishirkovo. But in Zafirovo, 1 ton of corn is produced with 4.88 hours of work, with 6.4 hours in Belitsa, and 5.7 in Tutrakan. The equaling of the achieved highest indicators and the use of their experience are an essential question. In the United States, over a period of 1972-1976, 1 ton of wheat was produced with 3.6 hours of work, and 1 ton of corn with 2.3. In this regard remarkable achievements have been made in recent years in a number of oblasts, krays, kolkhozes and sovkhozes in the USSR and in the GDR.

The plans are in 1980 to have the minimum per decare average yields of: 500 kg for wheat, 630 kg or corn grain, 220 kg for soya, and 235 kg for sunflower.

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BULGARIA

#### BRIEFS

BULGARIAN-FRENCH ECONOMIC TALKS--Sofia, 31 Mar (BTA)--The ninth session of the Bulgaro-French committee for economic, industrial and technological cooperation, opened here today. The delegations are headed by the ministers of foreign trade of the two countries, Mr Khristo Khristov and Mr Jean-Francois Deniau. Questions of the further development of Bulgaro-French contacts in the different economic branches will be discussed. A protocol is expected to be signed. [Text] [Sofia BTA in English 1825 GMT 31 Mar 80 AU]

CSO: 2200

### OFFICIAL CALLS FOR IMPROVING TRANSPORTATION EFFICIENCY

Prague HOSPODARSKE NOVINY in Czech 14 Mar 80 pp 6-7

[Article by Engineer Jiri Jriu of the Federal Ministry of Transport]

[Text] Last year, the state plan had counted on the transportation of 1,479.400,000 tons; 1,470.100,000 tons were transported. Sharing the 9.3 million-ton difference between plan and reality are railway transport with a "debt" of 1.7 million tons, waterway transport with 0.6 million tons, and public highway transport with 7.9 million tons. In contrast to this, only industrial highway transportation transported 900,000 tons of items above the plan. See also the chart on page 2, the Transportation System of the CSSR Last Year and This Year).

Such is the language of numbers. It is also possible to add that even with this partial non-fulfillment of the plan assignments, last year, transportation surpassed the 1978 output by 53.8 million tons, which signifies a growth of 3.8 percent. Nevertheless, the main question, conceivably, is whether or not the real needs of the national economy were provided for. With some reservations, it is possible to answer: Yes, basically. This was recently shown graphically in January and February of this year, when there were no items available for transportation, and when the railroads, in particular, had "nothing to transport" for a while. This would attest to the fact that even for the exceptions (i.e., construction materials, especially), there were no untransported goods left over at the end of the year. There will be an opportunity to return to this question later on in the article.

As had also been assumed, real difficulties manifested themselves last year, mainly in construction materials. The railways remained 1.4 million tons in arrears. This was so in spite of the fact that aid was provided by Hungary (VOLAN transportation enterprise).

Waterways transport had to contend mainly with supplying of the Chvaletice Electric Power Station, mainly during the time of heavy frosts. Nevertheless, the overall assignment--3.05 million tons of coal--was provided for, even at the cost of various measures, for example, the combination of rail-road and highway transportation.

A Lower Rate as Compared With the 5-Year Plan

From the standpoint of the guidelines for the Sixth Five-Year Plan, transportation developed slower. The 5-year plan had counted on a total increase of 18.5 percent for the last 4 years; however, a rate of 15.3 percent was attained. Railway transport recorded a growth of 4.4 percent (as against the planned rate of 9.9 percent), Czechoslovak State Automobile Transportation rose 8.9 percent (instead of 26.4 percent), and waterways transport rose 54.4 percent (instead of 86.0 percent). Only in industrial highway transport was the 5-year plan premise of 17.9 percent adhered to.

The initial guidelines were not even adhered to completely in the division of labor between public and industrial highway transport: It had been expected that the Czechoslovak State Automobile transportation would carry 50.7 percent of total highway transport for us in 1979; in actuality, it carried only 49.6 percent. The larger part then and last year continued to be borne by industrial highway transport.

The tendencies noted here have been manifesting themselves since the beginning of the 5-year plan. The strain between transport needs and the possibilities for satisfying same has been steadily growing more acute. Frequently, it was necessary to go the way of declaring priorities, which solved the specific cases involved, but not the overall transport needs of the national economy as a whole.

Therefore, the basic documents of both the Presidium of the CPCZ Central Committee and the Government of the CSSR were a significant step toward the solution of transportation policy, rail transport, and the rationalization of highway transport. These provided the conditions for a more favorable fulfillment of the tasks, especially in the transport of coal. The approach to the fulfilling transportation goals and the concern of supplier departments for the urgent requirements of transportation also improved in part. Last year, it was possible for the first time to halt the decline in number of workers that had been developing for years (especially in railway transport), and to finally attain an increment of 1,300 workers. Nevertheless, the planned complement of the railroads has been chronically short of about 1,700 workers, mainly in certain critical specialties. In the meantime, there was no success at all in eliminating and solving the problems accumulated from past years, but one could not even assume any such thing.

A number of problems continue, therefore, and their complete solution is conditional on extensive investments, especially in railway and highway transportation. And even though certain reserves are still evident in the efficient use of transport facilities, they cannot always be fully utilized as a result of other unsolved aspects of the transportation process, in certain cases, with respect to the level of management, the division of transportation labor, and not least of all, also, as a result of the unpreparedness of the transport facilities to conduct handling operations

under winter conditions. The slow start in containerization could also be pointed out in the same way.

Slippage at the Outset

This year, transportation is faced with an assignment 2.8 percent higher than last year's, or 1,511.200,000 tons. At the same time, this volume is 59.3 million tons lower than the 5-year plan guidelines. With respect to the ever higher transportation demands of our economy, this can be considered to be a positive phenomenon, of course, on the premise that the objectively necessary needs of the national economy will be provided for in this way.

Of the total output of the transportation system (97.5 billion ton/kilometers this year), three quarters is accounted for by the railroads. In highway transport, the Czechoslovak State Automobile Transportation is to realize 50.6 percent of the output; the remaining 49.4 percent is accounted for by industrial transport.

In the same way as last year--in spite of a campaign in the press, radio and television--the railways started out with slippage. A deficit of one million tons of freight can be attributed in January alone to the score of a chronically lagging operating tempo; of this number, 300,000 tons are accounted for by coal. In February, the deficit increased further to 1.4 million tons. With their well-known capacities, the railways will not be able to make up for these losses very easily in the coming weeks and months; in certain categories, the capacity is irretrievably lost.

It is truly puzzling that on certain days, loadings even fell below last year's level, and were attributed at that time to the unusual meteorological conditions. This means, that this year again, certain categories will be carried out on a priority basis, but to the detriment of other categories. Moreover, in such a situation, it is necessary for the shippers to adhere to the established loading schedules, in order to avoid an accumulation of end-of-the year transportation claims. However, fuels will surely be task number one this year also. The plan calls for loadings and unloadings in the amount of 85.7 million tons of fuels, which is 400,000 tons higher than the actual fulfillment last year. Of the critical mining basins, OKR [Ostrava-Karvina Coal Basin] accounts for 25.6 million tons, the SHD [North Bohemian Brown Coal Mines], for 37.5 million tons, and the HDBS [Brown Coal Mines and Briquette Plants in Sokolov], for 12.6 million tons.

The next place right after fuels belongs to construction materials. In the plan for loadings, 46.4 million tons are recorded, which is 600,000 tons more than last year. Nevertheless, certain problems persist mainly with regard to the backlogs of transport hauls in certain areas, especially in North Bohemian Kraj, and with respect to the capacities and structure of the available rolling stock. Along with the transport hauls specified in the plan, there is a yet unanswered open question—the transport of nearly 1.2 million tons of cement and other types of construction materials.

It will be necessary to devote exceptional attention to the export shipments to the USSR, which are increasing by 10.4 percent this year. However, imports are still continuing to increase by 12.1 percent over last year. Of our total imports from the USSR of about 22 million tons this year, iron ore accounts for a full two-thirds. In order to provide for this increased turnover, it will be necessary to find new transport routes in cooperation with foreign commercial organs, apart from the regular route at Gierna nad Tisou-Chop, for example, via a by-pass through Poland or Hungary, through combined rail and water transport, through the use of a container transport system, etc.

#### Water Continues To Be Underestimated

Public highway transportation awaits no less attention especially when in its case the annual index amounts to only 2.2 percent (in tons) and 3.4 percent (in ton-kilometers). The greatest problem continues to be that of construction materials. In the meantime, about 9 million tons have not been covered, the greater part of this in North Bohemian Kraj--close to 7 million tons. At the present time, investigations are being made, and it is assumed that after a determination is made, the volume in default will be reduced somewhat. This reduction, however, is not going to be great enough to solve our headaches insofar as losses are concerned. Certain possibilities are offered: Waterway transport, in the meanwhile, has not exhausted its planned volume of construction materials in domestic transportation: Certain reserves could also be found in industrial transport.

The increased utilization of the vehicles of highway transport is clearly aided by the publicity about its advantages, which reinforces its extent and scheduling. The number of exceptions from the advertising is also reduced, and in contrast, greater support is obtained within the scope of the transport carried out. All of the current measures follow one goalthe lowering of the energy requirements of the transportation sector.

One of the far-ranging steps in this direction is the examination of all imetables of the Czechoslovak State Railroads, and the Czechoslovak State Automobile Transportation in passenger transportation. Their coordination is supposed to be improved, and the runs on little-used or parallel transportation routes are supposed to be cut out or limited. The results of the examination will show up in the timetable changes of 28 September 1980, at the end of the period of the so-called summer time.

The volume in waterway transport shall be increased by 16.2 percent as against last year, which means by 10.2 million tons. The transport of coal along the Laba River to Chvaletice is significant: 3.6 million tons this year, which is 50 percent more than last year. Waterway transport is supposed to handle the entire transport load, without the aid of alternate transportation means, because these are very costly. Therefore it is expected that there will be 53 days in a year when waterway transport will be unable to operate; accordingly, the necessary preparations have to be made ahead of time.

As was noted before, in the meantime it has not been possible to fulfill the volume of construction materials, especially gravel sand. In the plan, waterway transport has 1.9 million tons of construction materials. It seems that the shippers prefer to rely on trailers and railroad cars, rather than to take the trouble to get the contracted land transportation from them to the ports, if possible. In truth, however, one must not overlook even the influence of the limits on the fuel consumption even when one's own solution is again merely passed on to the shoulders of the railroads.

# Economically, and Above the Clouds

In air transport, also, it will be necessary to take a long hard look at efficiency, at fuel consumption, and at the management of foreign exchange funds. The planned transport (2 million passengers) is provided with certain reserves included for unforseen events. The increased transport goals to the socialist countries, in connection with the Moscow Olympics, will be implemented on a priority basis.

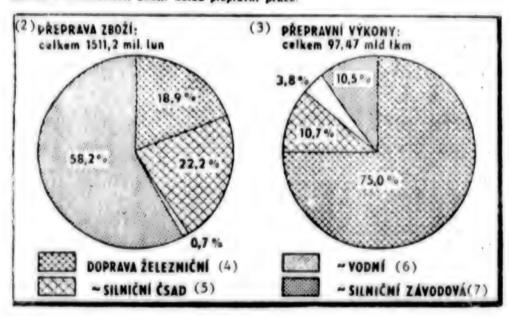
On the other hand, it will inevitably be necessary to abandon or limit certain routes, especially those with losses, or which parallel other types of transport. This will apply in the first place to the Prague-Brno route after the completion of the super highway, which, according to the social obligation of its builders, was supposed to be ready by 7 November of this year. Of course, this will require high-quality express buses. Also, on certain of the longer domestic routes, there will be either a gradual limitation of flights, or a replacement by other types of aircraft more suitable for the given conditions.

From the facts cited, it is shown that the transportation goals have been carried out, but for a few exceptions. At the same time, there has been careful concern for economy in fuel consumption. Difficulties, however, are caused by the time and uniformity structure of supplies, especially of transport facilities and spare parts for them. It is not enough to supply just the volumes, but it is necessary also to adhere to the variety structure, which was not done at all last year.

At the same time, the supplies that failed to arrive, for which transport has funds appropriated are especially unsettling. This just will not do. Well, only in railway transport, the consumption of spare parts and labor input in repairing badly damaged cars are rising. At the same time, the railways are not waiting with idle hands. The volume of production of spare parts is increasing, in railroad shops, ship engines, etc., are being repaired. In highway transport, in addition to the well known problems of regular repairs and spare parts, the turning out of a concrete variety of lead-acid batteries and tires has come to pass in recent times. There is need indicated mostly for the priority supply of heavy trucks, trailers, and attachments, as well as buses of specific types. Only in this way will it be possible to achieve the needed rationalization of highway transport during the 1980's in the meaning of recent government decree No 241/1979.

Currently, according to the work plan of the government of the CSSR, and on the basis of the agenda of the 14th Session of the Central Committee of the CPCZ, in cooperation with the State Planning Commission, a collection of measures for providing for transportation needs during 1980 is being prepared. On the basis of analysis of last year, 1979, and the course of fulfillment of the Sixth Five-Year Plan thus far, decisive tasks will be set up in it--both for making provisions for transportation needs with respect to time and proper quality, as well as for the supplier sectors, since the steady operation of the transportation system as a whole also depends to great measure on how successful they are in solving this problem.

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DOPRAVNI SOUSTAVA ČSSR: delba prepravni práco.



1.601:

- 1. Transportation System of the CSSR: Division of Transportation Work
- 2. Goods Transport: 1,511,200,000 tons total
- 3. Transport Results: 97.47 billion t/km total
- 4. Railway Transport
- 5. Highway by Czechslovak State Automobile Transportation
- 6. Waterways
- 7. Highway Industrial Transport

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### ENERGY CUTS IN AGRICULTURE BY 1985 CITED

Prague ZEMEDELSKE NOVINY in Czech 22 Mar 80 p 1

[Article by kd : "The Issue Is Half a Million Tons of Fuel"]

[Text] This week the agricultural committees of both houses of the Federal Assembly dealt with a problem which was on their agenda already last year namely with rationalizing the consumption and use of fuel and energy in agriculture and the food industry. Things have changed since the Parliament of the People considered these problems a year ago. The deputies acknowledged the fact which was also presented by CSSR Minister of Agriculture and Food, J. Nagr, that all last year's recommendations were incorporated in the form of specific measures in the rationalization plan prepared by his ministry.

Rationalizing the consumption and use of fuels and energy in the CSSR agriculture and food industry should result in a saving of 856,000 specific tons of fuel (stf) in 1985 compared with this year's consumption with 511,000 stf coming from the Czech Socialist Republic. This goal is expected to be achieved mainly by more efficient utilization of transportation in agriculture, innovation of drying facilities, more economical soil preparation in growing cereals and improved utilization of secondary energy sources in the food industry.

## Replacing Tractors with Trucks

Agricultural transportation constitutes a great future reserve for fuel economy and is at the same time also a limiting factor for the use of second generation machinery and its inclusion in production lines—for example self-propelling cutting machines, harvesting threshing machines, six-row sugar beet harvesters, etc. The introduction of an agricultural truck with a carrying capacity exceeding 8 tons will result in great savings estimated to amount to 100,000 tons diesel fuel in the Seventh Five—Year Plan alone. In 1985 the proportion of tractor—propelled transportation in agriculture should thereby be reduced from the current 30 percent to mere 5 percent of the overall volume.

Naturally, the reduction of diesel fuel consumption in the Seventh Five-Year Plan will depend on the number and type of special trucks which will be allocated to agricultural enterprises.

# Using Solar Drying

The limited resources of heating oil and gas will also affect drying operations in agriculture in the future. A number of rationalization measures in the construction of dryers will probably still remain in the design stage for the next few years such as, for example, installations for the recirculation of combustion gases, improved automation of controls, supplementary predrying installations, etc whose deliveries will depend on the production possibilities of the engineering industry.

A considerable saving can also be achieved in 1985 by the strict observance of operational instructions for drum drying installations which could amount to 15 percent of current consumption.

In this connection the deputies supported the ministry's plan to accord preferential status to the production of low temperature fodder drying installations. The respective production sectors will be directed to develop, produce and deliver them as soon as possible.

#### less Work With Cereals

New soil preparation technologies represent great savings in labor and energy. By 1985 a limited depth soil working technology may be applied on more than 700,000 hectares of land and a technology involving no soil preparation on approximately the same area. By 1985 under normal weather conditions the application of this type of soil preparation could yield a saving of 1,195,000 manhours and Kcs 246.7 million in direct expenditures—which in terms of diesel fuel represent 15 to 19,000 tsf.

Naturally, also the implementation of the above work methods and the ravings of fuel, labor and other direct expenditures accruing from their introduction depend on the availability of the necessary machinery involving plate ploughs, drilling machines with two-wheel sowing hoppers and drilling machines for unploughed land.

### Double Benefit

Recently the possibility of using secondary sources of energy, i.e. those which have already been used once has been drawing increased attention of state organs and deputies. By 1985 the contribution of this type of energy in the food processing industry should yield 22,300 tsf. This involves the utilization of liquid waste fuel in alcohol- and yeast-producing enterprises, the utilization of waste heat in freezing plants, bakeries. On 1 March an agreement was concluded between the Ministry of Fuels and Energy and the ministries of agriculture governing the utilization of waste

heat from compressor stations of the transit gas pipeline. This heat will be used in the newly established greenhouses, low temperature fodder drying plants, air-conditioned potato storage facilities, etc. Of 10 locations where the heat from the compressor stations is suitable for growing vegetables, six are already in the process of building the necessary facilities, for example at Breclay, Kralice and Oslavou and Kourim. In 1985 the completion of these projects will yield a saving of 184,000 tsf.

On solar energy, Minister Nagr said that in this field amateurs must give way to professionals. He said also that in 1985 up to 70,000 square meters of solar collectors will be in operation in agriculture, mainly in animal production enterprises.

In conclusion of their deliberations the deputies agreed that the committees will deal also with energy aspects of other topics under consideration in view of the urgency of the energy problem and that they will make sure that their recommendations are consistently implemented.

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CSO: 2400

### BRIEFS

L-410 SALE TO SOVIETS--Let, national enterprise in Kunovice, is selling L-410 aircraft (Turbolet) to the USSR for use in Siberia. It is produced in several versions as a "flying bus," "ambulance," "cargo aircraft," and even as a "flying laboratory." After some discussions with the Soviet representatives, the Czech engineers developed yet another version, the L-410 UVP. The last three letters indicate that the aircraft is capable of short take-offs and landings on 465 and 571 meters respectively. The wing span of the new aircraft has been increased and together with the larger area they provide better flight stability; automatic tilt and setting of propellers, a system to prevent the brakes from blocking, better cockpit arrangement, and higher performance engines at higher temperatures have also been added. The new modifications will enable the aircraft to land on rocky and sandy landing strips. It is also capable of operating on ice and snow, during day or night. Although originally planned as a transportation for up to 400 km, its maximum range is 1000 km at travel speeds of 365 km per hour. With two pilots, it can carry 15 passengers and the transport version carried 13 metric tons of cargo. Soviet Union already has 15 of these aircraft and is interested in using them for "bus" service around cities. There is an L-410 servicing station in Lvov and mother is being opened in Novosibirsk. [Excerpt] [Prague PRACE in Czech 14 Apr 80 p 1]

JSO: 2400

# DEPUTY CONSTRUCTION MINISTERS STRESS WORK ORGANIZATION, PLANNING

Scientific Labor Organization Important

East Berlin PRESSE-INFORMATIONEN in German No 32, 14 Mar 80 p 2

[Article by Ignaz Etrich, deputy minister for construction: "Scientific Work Organization Brings Gains in Productivity"]

[Text] In recent years, it has been possible to make activities of many combines and enterprises in the construction industry more efficient, the continuity of production has been increased, working hours have been used more efficiently and work has been made easier and safer as well. The balance for 1979 shows that approximately 20 percent of the reduction of working hours accomplished through the implementation of tasks from the Science and Technology Plan, through investment and efficiency measures, can be attributed to the account of the scientific labor organization.

The change or reorganization of more than 26,000 jobs improved working conditions for approximately 40,000 workers and created prerequisites for increased productivity. Simultaneously, health hazards caused by noise, dust, vibration or heat exposure were eliminated from approximately 5,500 jobs. Some 5,000 additional jobs benefited from technical measures for the removal of specific dangers causing accidents, in other words, they increased work safety. About 1,400 jobs were changed in such a manner that in the future women and young people can work there.

### Better Use of Experience

Last year, representatives of voluntary WAO [Scientific Labor Organization] collectives of the Metal Light Construction Combine VEB called upon the combines in the building, building material and prefabrication industries to compare performance, work habits and experiences of WAO collectives to learn from one another. The response was considerable, particularly in the Concrete Light Construction Combine VEB, The technical Building Equipment Combine and the Highway Construction Combine.

The voluntary WAO collective of the tile and shingle roofing facility in the Dresden Concrete Works VEB, department Cossebaude, which consists of

12 production workers, 2 foremen, a technologist, a WAO specialist and a plant manager, revised, for instance, the production procedures at the assembly line and suggested progressive time norms. They succeeded in significantly reducing time losses caused by technological factors and in raising the assembly speed. An 8.5-percent reduction in work time was achieved.

To increase the economic and social effectiveness of the WAO work even more, findings and experiences of the best collectives must now be generalized purposively and passed on to all the others outside the combine within the framework of production teamwork. Of the first priority are complex measures reflecting the Schwerdt initiative, "fewer people are producing more," according to which many jobs can be eliminated. We urgently need workers to expand multishift operations at highly productive facilities as well as strengthen efficiency measures on the middle-management level of enterprises.

First of all, it is important to establish those talks, the solution of which promises the most beneficial effect, improving working conditions and increasing work safety. In this manner, utmost effectiveness is guaranteed for the measures of socialist rationalization and the renewal effort oriented toward that goal, including the movement of the Fair of the Masters of Tomorrow. To date, much progress has been made with regard to the introduction of scientific labor organization in those collectives which utilized existing solutions for the creation of jobs and the application of technologies, as well as outside manuals for work and time norms to shape their own activities in a more and more efficient manner.

### Focal Points for This Year

This year, the WAO collectives will concentrate on those focal points that were established in the directive issued by the minister for construction, to continue the implementation of scientific labor organization within the period of the current five year plan. Production facilities of building material and prefabrication industries, for instance, are to be utilized much more efficiently with regard to time and other specific factors, above all, by increasing the work areas, introducing simultaneous operation of several machines and increasing the use of control and regulation techniques; these things are to be accomplished with the available potential of workers.

The important thing in the building industry is to improve the construction technology of work sites to make possible greater continuity in production and thereby generally observe the principle of rhythm in conveyor-belt production. At the same time, increased efforts must be directed at reducing the expenses for setting up and running construction site facilities, as well as avoiding material losses. The areas of preparation for production, management and administrative expenses by eliminating middle-management cositions, simplifying information gathering and using the opportunities of data processing more effectively. Planning, construction and technology capabilities must be increased in particular.

So far, all experiences have demonstrated that production collectives in the building trade are developing many initiatives for the introduction of scientific labor organization to improve the efficiency and quality of all investment and building activities. Much of the credit must go to WAO collectives and innovators.

It is up to managers to guide this great willingness for cooperation into the right channels by setting specific tasks, supporting initiatives everywhere, and promptly recognizing ideas and providing material support. The most important aspect of their work is to transform results quickly and unbureaucratically into economically effective measures. In this manner, they are helping work collectives fulfill their obligation of socialist competition, which is to increase production in construction and goods in 1980 by at least the equivalent of one workday.

Cost Reduction Through Good Planning

East Berlin PRESSE-INFORMATIONEN in German No 17, 8 Feb 80 p 2

[Interview with Prof Werner Kohl, deputy minister for construction; date and place not given: "High Quality Planning Reduces Construction Costs"]

[Text] [Question] Buildings and construction plants are to be developed and planned in such a manner that their economic value satisfies the demands of their clients, that energy needs will be kept to a minimum and that the smallest amount of material, money and time be used to erect them. How does this affect planners in the building trade and what are their responsibilities?

[Answer] It follows that as soon as construction starts, planning must provide measures which, when compared to earlier construction methods, will lead to significant improvements. For instance, the plan must include the use of improved facilities and products for the technical equipping of buildings to reduce the need of energy for heating. Compared to last year, in 1980 energy conservation must lower consumption by a total of 4,173 terajoules (approximately 996 teracalories). By 1985, the energy outlay for home heating is to be lowered by between 12 and 17 percent, as compared to 1980.

According to the demands of the 11th SED Central Committee Meeting, we want to achieve 50 percent of the increase in productivity in the construction industry—covering the period of the next five—year plan—through a reduction in materials, in other words, the specific use of materials is to be lowered significantly. This can be accomplished primarily by planning material—efficient construction and building methods, as well as minimizing the amount of construction for investment projects. Planning must also take into consideration the actual construction process and technology to assure the erection of buildings and other structures with a minimum of

labor hours. We must measure the quality of work of our planners by how they fulfill these demands.

[Question] What experiences and approaches have stood the test of time to carry out these high demands during the planning process?

[Answer] The important thing is constantly to ascertain the latest findings in science and technology and to apply them effectively to the plans. It is also the most important prerequisite for an active and dynamic development in quality. With regard to standards, ordinances, and other regulations, timely economic demands are to be established. A prerequisite for the highest quality in planning is the assurance of a uniform and strictly organized regime of advanced planning, control, evaluation and stimulation.

One method which has already proven itself for achieving high quality in project planning is working with a planning outline. Particularly in the case of industrial building combines, the use of such a planning outline leads to the application of research results to a specific project. The planning outline, which contains all attainable effects of material, energy, labor and cost savings, is a part of all planning documents. Building industry combines, however, must still implement more effectively the process of ascertaining those causes for deviations from the effects established in the planning outline which appear during construction.

[Question] Is it possible that planners will be able to utilize present standards and regulations to fulfill their tasks to the utmost?

[Answer] To guarantee the efficient and complex handling and quick access to the standards, the GDR Architectural Academy developed the most organizational resource, the "manual of uniform technical regulations for construction," accompanies by a supportive research system. It contains all construction industry standards and regulations, systematized in such a manner that they can be found quickly by using the glossary. The standards and regulations themselves have been stored on microfilm and can be found by the planner at his workplace after completing his research and retrieving the information from storage. The table of contents as well as the glossary have been put together by using electronic data processing and are kept up-to-date in this manner as well. This method was first introduced at the 1979 building trade exhibition in Dresden. It stood the test and, in the meantime, it has been used by many planning establishments.

[Question] What is being done to guarantee the quality of projects and adherence to outlay norms?

[Answer] At the present time, quality assurance during planning is maintained primarily by the test and control mechanism of the state building inspection system and the technical control organization. An analysis of

the results, which were gathered by the state building inspection system during their controls in 1979, shows that most of the planners are meeting the demands for quality established through standards and other regulations. A number of projects, however, are showing defects again and again. In 1978, as a result of checking plans by the state building inspection system, reductions had to be made for excessively stated outlays for materials, for instance, 8,000 tons of cement, 22,000 tons of steel and 1,100 cubic meters of cut timber. This clearly demonstrates the extent of responsibility borne by combines, enterprises and establishments themselves.

It is essential to prepare and reliably apply investment outlay norms as a foundation for the continuing development of the quality of project solutions. The first results of tests in the Bau- und Montagekombinat Chemie VEB indicate that by using this method and in combination with goal-oriented stimulation of planners, a noticeable increase in quality became evident while lowering the cost during planning. At the present time, however, outlay norms are not yet available for all categories and types of investment objects. Consequently, plans have been established to continue the preparation of such norms.

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## INNER-GERMAN TRADE STATISTICS FOR 1979 PUBLISHED

Bonn INFORMATIONEN in German No 5, Mar 80 pp 13-15

['Documentation' report by FRG Ministry for Inner-German Relations, based on TAGESNACHRICHTEN (Daily News) of FRG Minister for Economics, dated 7 Mar 80: "Inner-German Trade 1979"]

Text As compared to last year, inner-German trade has developed as follows in 1979:

	in millions of accounting units		1979/78	lst half 79/ lst half 78	2d half 79/ 2d half 79
	1978	1979			
Deliveries to GDR	4,754.4	5,092.8	+ 7.1 %	- 7.2 %	+ 19.9 %
Purchases from GDR	4,066.3	4,791.8	+ 17.8 %	+ 4.8 %	+ 31.3%
	8,820.7	9,884.6	+ 12.1 %	- 1.5 %	+ 25.0 %

Registering a gain of 12.1 percent, the growth rate of inner-German trade was on the rise again after the 1977/78 downswing (when it rose by only 2.5 percent on the average). For the second time since 1974, an increase in turnover of more than one billion accounting units was registered. The 1979 result, however, was governed by price developments to a greater extent than in years past.

The generally favorable result was influenced substantially by the higher-than-average growth rate of 25 percent during the second half of 1979; during the first half of the year turnover decreased by 1.5 percent. Time will tell whether the upturn of the latter half year will continue and whether inner-German trade can return to the transfer growth rate achieved prior to 1976.

A positive sign is the reduction by more than half, from about 700 million accounting units to 300 million, of the GDR balance of trade deficit which was due to the marked increase in GDR sales (by 17.8 percent) as compared with our more modest increase (of 7.1 percent). The deficit was based exclusively on service sector transactions. In the exchange of goods, on the other hand, the GDR achieved a slight surplus (of 16 million accounting units) for the first time since 1968.

In the services sector the GDR traditionally incurs a deficit. The deficit has risen by more than 100 million accounting units to 300 million primarily because of higher interest payments this year (also expected in years to come) on long-term credits granted to the GDR to finance heavy equipment deliveries.

As a result, overall reciprocy obligations, including Swing utilization (the so-called accumulated credit balance) have increased from DN 3.67 billion at the end of 1978 to DM 3.91 billion by the end of 1979. The result would have been more favorable, if the GDR had not further reduced its free DM payments via Account S (from DM 71 million in 1978 to DM 35 million in 1979).

Deliveries increased by 338 million accounting units overall. The comparative figures for the most important items were as follows:

	in millions of accounting units		change from last year	change from last year
	1978	1979	in millions of accounting units	in percent
Machine building, electrical products	1,488.7	1,131,3	- 357.4	- 24.0 %
Chemicals	745.5	825.4	- 79.9	+ 10.7 %
Agricultural and forest products	373.7	428.6	<b>4</b> 54.9	+ 14.7 %
Iron, steel, extrude and cold rolling mil goods		351.4	4 18.3	<b>+</b> 5.5 %
Petroleum, crude	244.6	348.8	+ 104.2	+ 42.6 %
Mining products	127.5	268.2	+ 140.7	+ 110.4 %
Textiles, apparel	229.4	232.8	4 3.4	+ 1.4 %
Nonferrous metals	100.9	218.7	<b>→ 117.8</b>	+ 116.7 %
Services	557.8	712.2	<b>+</b> 154.4	◆ 27.7 %

The distinct upward trend in most areas more than offset the marked decline (of 357 million accounting units) in the proportionately largest field of machine building and electrical products. Delivery of these commodities was strongly affected by the decline in heavy equipment orders. Deliveries last year amounted to 570 million accounting units, but declined to 115 million in 1979. But in 1979 a number of contracts for small and medium-sized equipment were signed which raise expectations of a more favorable trend in machine delivery to the GDR in 1980.

The other major items all developed favorably, with nonferrous metals, chemicals as well as the agricultural and energy sector registering strong gains. The energy sector gains (in petroleum and mining products) of 245 million accounting units were particularly high, with increased hard coal deliveries from the GDR (141 million accounting units more) leading the field because of the energy squeeze. The petroleum increase, however, is largely due to the general rise in oil prices. But all in all, the long-term agreements concluded at the 1979 Leipzig Fair hold out hope for a bright future.

Increases were also registered in agricultural goods, particularly in feed once again. The large increases in nonferrous metals and chemicals (inorganic bases) are due primarily to general price rises.

Purchases from the GDR increased by 725 million accounting units overall. Here again, the major items reflect the markedly favorable trend.

The overall increase on the purchase side, however, is due in large part to the substantial price increases on the world oil market. Mineral oil products alone account for about 70 percent of the increase. Since the actual amounts rose only slightly, real growth of purchases from the GDR is probably substantially lower. The remaining commodities by and large reflect the general increase. Only iron and steel deliveries increased more than the average, rising by 49 percent. Textile and apparel purchases in the GDR, which had stagnated in earlier years, were down; most likely a sign of increased third-country competition for the FRG market, which makes it more difficult for the GDR to expand its share of it.

	in millions of accounting units		change from last year	change from last year
	19 <b>7</b> 8	1979	in millions of accounting units	in percent
Mineral oil pro- ducts	593.5	1,104.9	4 511.4	+ 86.2 %
Textiles and apparel	759.2	671.7	- 87.5	- 11.5 \$
Agricultural and forest products	581.5	609.1	+ 26.7	+ 4.7 %
Chemicals	371.0	434.9	+ 63.9	+ 17.2 %
Machine building, electrical pro- ducts	294.4	322.3	<b>+</b> 27.9	+ 9.5 <b>≸</b>
Iron, steel, ex- truded steel pro-		275 7	. 777 0	+ 48.6 %
ducts	158.3	235.3	<b>+</b> 77.0	
Wooden wares	198.2	215.9	<b>+ 17.</b> 7	4 8.9 %
Iron, sheetmetal and metalware	124.7	143.3	<b>→</b> 18.6	+ 14.9 %
Services	<b>350.4</b>	394.5	4 44.1	+ 12.6 %

CSO: 2300

#### GERMAN DEMOCRATIC REPUBLIC

### METHODS TO RAISE COMBINES' ADMINISTRATIVE EFFICIENCY OUTLINED

East Berlin EINHEIT in German Vol 35 No 3, Mar 80 signed to press 13 Feb 80 pp 285-291

[Article by Prof Dr Wolfgang Sieber, director general, VEB Robotron Combine: "Rationalization of Administrative Work in the Combine." For translations of related information see items published under headings as indicated in the following JPRS issues of this series: "Combine System's Development, Future Tasks Analyzed" and "Prime Cost Reductions Urged to Raise National Income," 75132, 14 Feb 80, No 1980, pp 15-26 and 27-35; "Combine Production Methods Seen Improving Consumer Goods," 75398, 28 Mar 80, No 1992, pp 2-12]

[Text] In the Robotron Combine there are 70,000 working people employed, 8,000 of them in R&D. The combine handles the production of electronic data processing and office machinery, radar and testing devices and electronic consumer goods. Circa 70 percent of the end products is meant for export to more than 60 countries. For that, the combine has its own agencies in 20 countries. Thus far the combine has supplied domestic and foreign users with more than 2,000 data processing installations, computers and minicomputers. Exports to the Soviet Union in 1980, according to plan, exceed a value of one billion valuta marks. At the 1980 Leipzig Spring Fair, the combine will present its new modular production program, "Decentralized Data Processing Technology, which is based on microelectronics. That includes efficient data storage equipment, efficient automated bookkeeping, billing and accounting devices and a new small-data processing installation. The combine's microcomputers are increasingly being used in end products of the GDR's machine and installation construction.

The SED's basic conception for the growth of economic efficiency in the GDR also includes recommendations for rationalizing administrative work in the combines. By way of using results and projects in the Robotron Combine, experiences and means of rationalizing the administration through electronic computers and office machinery, for combine efficiency improvements, are presented in this article. The central point lies in gaining more manpower for production work.

The centerpiece of our party's strategy for the further economic development of the GDR lies in higher energy efficiency in all fields. An essential element of the basic conception for economic efficiency growth lies in an accelerated development and application of microelectronics, the use of industrial robots, electronic machine controls and further application of electronic computer technology. "That creates decisive prerequisites for thoroughly improving our technical and technological production level. New opportunities arise for socialist rationalization, up to rationalizing our administrative work." Clear guidance for that came from the "proposals for rationalizing the administrative work in the ministries, combines and enterprises in industry and construction and in other economic fields," with which the Politburo has dealt in working on the basic conception for improving our economic efficiency. Its implementation must make a considerable contribution to the economically perceptible "thrust in rationalization" which combines the all-round unfolding of all working people's creative initiative with the utilization of the latest scientifictechnical data and an accelerated introduction of highly productive technologies, a more efficient use of our social labor capacity, and a higher grade of management activity. The actual nucleus of this task lies in releasing enough manpower through rationalization to ensure expanded reproduction through an improved utilization of basic assets available and boost labor productivity in a much larger number of combines and enterprises faster than output."3

At its llth plenum, the Central Committee made it explicit that the combines have the complete responsibility for making full use of all possibilities in socialist rationalization and for creating their own conditions through which their expanded reproduction can be ensured through less labor. The working people in the Robotron Combine are engaged in great efforts at coping with this task. Since 1977 the combine has succeeded in boosting its labor productivity faster than its output. For carrying on this successful development, the 1980 plan provides for reducing the number of manpower by roughly 400 below the 1979 figure while improving labor productivity by more than 12 percent. By an average of 1,500 workers below the 1976-1980 Five-Year Plan allocation annually, the combine in 1980 will meet its five-year plan industrial commodity production quota no later than at the 63rd anniversary of the Red October.

High Level of Management, Planning and Organization While Reducing Number of Workers

This intended performance improvement of the combine commits us all the more to achieve the high level of planning and organization needed for it through curtailing manpower. Prerequisite to that is our systematically perfecting our economic management organization in the combine—with a view to the combine's economic requirements and long-range production program—, which will offer still broader opportunities for the unfolding of the working people's creativity and initiative and for their employment. What is wanted is more efficient labor organization in the combine all—around, more effective forms of division of labor, and combining the work on the jobs and between the departments in the enterprises and the combine's enterprises.

The use of latest technologies, including R&D technologies, in management and administration, calls for changes in the distribution of manpower over the various departments and in the working people's skill structure. Our combine management must have clear concepts about these changes and be strict in carrying them through. Their goals, ways and means, our experience tells us, must be set down in long-term management documents prepared by the general director. A central position for improving our combine's efficiency attaches to the technological conception, the conception for rationalizing the R&D processes and the comprehensive program for effectively organizing the social labor capacity, always projected for the time up to 1985. This is what it means in particular:

The technological conception is worked out in close combination with the production programs and contains—all the way from research to customer service—all technological tasks, including the consequences resulting from them for the development of working time expenditures, and for the structure of jobs and manpower.

For expanding technological capacities, we must significantly boost our own production of means of rationalization, devices and tools. That alone will ensure an accelerated application and efficient production of new products.

While our manpower potential will more or less remain constant, administrative personnel is to be reduced for the benefit of the production preparation and productive areas.

And the variety of factors affecting the curtailing of manpower in management and the administration calls for a comprehensive and long-term approach to making the most efficient use of the labor capacity in the combine.

Combining the major tasking measures for making the social labor capacity more effective in the combine's comprehensive program for 1979/80 has been found beneficial. Right now the enterprise collectives are discussing and specifying a draft program like it for the 1981-1985 period. Through socialist cooperation, a combine conference on making more efficient use of the

combine's labor capacity is under preparation. It has altogether proven a good method for elaborating and enforcing a uniform combine strategy to hold annual combine conferences on major tasking areas for improving the combine's efficiency attended by working people of the combine enterprises and their respective partner institutions. The results of such conferences become an important joint working basis for the party secretaries council, the BGL chairmen's collective, the FDJ activists group and the combine management in their ideological work and for developing the working people's initiatives in the plan discussion, in socialist competition and in the innovator movement.

Accurately Specifying the Content and Scope of Administrative Work!

The first thing to be considered in any administrative rationalization must be the question whether a particular project is necessary altogether. Even by critically and unreseverdly examining the need for adminis rut we processes, essential handles for administrative rationalization and se found. Combine enterprises have rules, for instance, which once we justified but which now, with the enterprises being parts of the combine, no longer apply. One must check them and change them and simplify them, and in simplifying them one must get enough organizational rules that will fully meet the higher demands placed on the combine without adding even as much as one mark to our administrative expenditures. More than that: the expenditures for planning, controls, accounting, statistics and reporting must be significantly reduced through greatly streamlining things within the combine and thereby facilitating more of a creative proportion of the work. Too many still are busy compiling and analyzing data on processes that were finished without our drawing any inferences from that, or even without our being able to draw such inferences, for future processes. At times also the degree of detail of information is out of line with what a particular management level needs, either too much or too little information is supplied. All this explains how important it is always again thoroughly to check the information requirements for all management levels--and not only in the combine. Superior organs also should keep checking whether all information requested is really indispensable for the management activity--especially the kind of information that is not at all needed for operations management of the processes on the lower management levels.

If, as in our own combine, each manager checks in regular intervals whether information asked for or submitted is actually analyzed in his management area and, without undue expense, improves the management's level of understanding, then we get an important condition for strictly reducing information to the level that is needed and, at the same time, for combining plan implementation on all management levels with the projections on future tasks. In general, the following applies: the combine's information requirements and the organizational solutions in line with them constantly have to be checked as to their efficiency and comprehensibility and their unequivocal relevance to clearly defined tasks. Information systems must be organized in such a way that their high efficiency as well as the check on their efficiency are ensured through their being accurately correlated with a firmly delineated management area.

# Perfecting Economic Management Organization

Through rational economic management in the combine, jobs can be cut back without any extra material expenditures, administration can be made more rational in conformity with the constantly growing criteria for science and technology, production and sales, and the premises can be established for an increasingly more comprehensive application of computer technology. A constantly more efficient combine economic management depends on a uniform overall conception, a high degree of independent responsibility by the combine enterprises themselves, clearly structured production assortments for combine enterprises, achievements to be performed and specific technological processes.

The following tasks are the main ones to be derived from developing combine economic organization:

Proceeding from the degree of specialization, concentration and cooperation, the combine's production program, developmental tasks and sales performance have to be assigned, in conformity with long-term rationalization conceptions, to the enterprises in such a way that the economic relations among the enterprises are made efficient, with the least amount of "frictional losses," through planning, accounting and contracts, and that performance improvements in each enterprise are stimulated and challenged over the long run.

Clear lines of cooperation have to be set up incurring minimum coordination and transportation expenses. To that end, the cooperation must rely on a technically, technologically and economically sound division of labor. Cooperation merely to "compensate" for capacities or to close "capacity gaps" inevitably causes greater managerial and administrative expenses.

For structuring efficient management and information relations, the combine has worked out a method for establishing norms setting down, depending on how complicated the management processes are, the proportion between managers and workers ("managerial capacity norms"). Assisted by a precise distribution of the tasks and a uniform matrix for the combine management and all combine enterprises, normally a whole management level could be done away with.

Further reserves must be tapped through performance comparisons and through scientific labor organization. Setting up criteria for exemplary solutions and best values has proven itself in this regard. Proceeding from there, rationalized solutions for making more efficient use of the social labor capacity can be derived from it for all other areas.

Through our scientific labor organization, the combine will have to transform prior to 1985 "low requirement jobs" for 5,800 production workers into highly productive jobs demanding in assignment. This will make possible not only applying the high skills of the specialists normally working there

as an important source for using our social labor capacity more effectively but also improving their satisfaction with their work, the joy they can derive from their work and hence, ultimately, also their willingness to perform. Making jobs more attractive and creative also is important for motivating managerial and administrative personnel for work in production.

As guidance for best values we are making increasing use of international comparisons in terms of the expenditure in live and embodied labor. For the world market does not pay us for what we have invested on the national scale but only for what meets the internationally attained level of expenditures. With that in mind, the enterprise directors, in rendering their annual accounts for the 1979 plan year, presented the general director with conclusions drawn from the comparisons with best international values.

Our combine is purposefully working on rationalizing cross-sectional processes touching on all management levels. The competent technical directors bear the responsibility for that. The number of the managerial and administriative personnel employed in the combine enterprises and in combine management for any given specialized area is an important evaluation criterion for the work of the technical directors. Here too we are testing model solutions which are then supposed to be made effective gradually for all the combine enterprises. For instance, in combination with state regulations a conception for the rationalization of control processes was worked out aiming at raising the responsibility of the competent managers and the working people for qualities and at concentrating the technical control organization more strongly on the basic issues in developing and ensuring qualities. In the next 5 years, some 45 percent of the manpower in the technical control organization is supposed to be employed gradually in the production areas. Already in 1979, we assigned in this manner 150 testing personnel to work in production.

The combine seeks to make the available labor capacity and its systematic development, as crystallized above all in the manpower plan, more strongly the crucial point of departure for all its economic development. An important function attaches here to the position plan, as part of the manpower plan, because it is the most important planning, management and control instrument for insuring the most favorable employment of our labor capacity both in the quantitative and qualitative respect.

It is the specialized directorate for labor and wages which carefully sees to it that the position plans for the enterprises and specialized areas, confirmed by the general director, as well as such documents as the employment group catalog and the managerial capacity norms, are observed. At the annual rendering of accounts before the general director, we make a check on the position plan's having been observed, and from that conclusions are drawn for making better use of the available skill potentials and the long-term changes in the skill structure. One result of the rationalization of managerial and administrative work in the last 2 years has been the position plan-effective cutback of 1,715 jobs in management and the administration. We intend to reduce the proportion of such jobs by 1985 by another 3 to 4 percent.

Use of Electronic Computer and Office Techniques

Electronic computer and office technique greatly contributes to perfecting management and planning, rationalizing processes in the various areas and, hence, the combine's improved performance. It is especially our combine which can provide the practical evidence for it because that, after all, clearly exhibits the quality of our own products in our daily work. When we use such most up-to-date computer and office techniques, produced in the combine, in all enterprises of the combine, we are fully aware of the responsibility we have to use it not only in the interest of improving the capability of our own enterprises and our own combine, and of assisting in the selling of our products, but also in the interest of thereby demonstrating the efficient use of this technology and providing examples for its broad application. That is one reason why we are also making the greatest efforts to equip more and more combines with our electronic computer and office techniques.

The use of computer and office techniques is an inseparable element of comprehensive socialist rationalization. It must be connected organically with the measures for perfecting the organization. The following main directions have been set down for the combine:

Use of computer and office techniques as means of rationalization for R&D, project planning, production preparation, and for assisting in the application process and in technology. Computer time for all computers installed in the combine for these fields of application at present comes to 55 percent.

Use of computer techniques in the control of production and the management processes and in the automation and partial automation of technological processes.

And the use of computer and office techniques for higher skills and rationalization of management and planning on all levels (improving the intelligibility of the processes, assisting in projections, computations for interinking various operations, analytic activity and so forth).

The computer technology now available in the combine enterprises has to be increasingly better utilized in the years to come both with regard to the proportion of productive operational time use and to the efficiency in the fields of application.

A necessary prerequisite for an effective use of electronic computer and office technicques is the managers' readiness fully to exercise their responsibility for preparing the use and for using these techniques in their areas of responsibility. Yet our experiences emphatically confirm that the effect computer techniques with all the different and complicated technical and organizational tasks that come with it for the manager to handle increasingly depends on the proper conduct of the collectives, on the skill, understanding and commitment of the working people. And that precisely is the reason why

we attach such great importance for advancing in this field to comprehensive political-ideological work. In our combine, for example, the first thing that had to be done was to make clear that a uniform conception for the whole combine had to be our point of departure. That alone makes it possible for instance to carry through project planning and project reuse through a division of labor in implementing ADP application with the capacities we have available at higher speed and greater breadth. Project planning through division of labor must be combined with a subject field-related specialization of the project planning capacities in the combine enterprises. That also means that for each subject field one enterprise is to be assigned which will be responsible for creating a uniform problem solution and for applying the computer techniques to the solution. When the data systems are thus simplified duplication can be avoided and, in case of accidental breakdown, ADP projects can be shifted without complication. The community of users has been four useful here as a management instrument.

For conveying all these insights and their implementation, the combine's party organizations have played and are playing an important role. They develop convincing argumentations and challenge and promote the communists' exemplary conduct, which affects all other working people. A temporary party activists group, "ADP Application," with its purposeful work had a particularly great distinction in introducing computer techniques in our enterprises. Through painstakingly and patiently clarifying many politicalideological questions having to do with the comprehensive application of ADP, it helped strengthen the willingness for active participation and showed that the potentials of electronic computer techniques, combined with the advantages of our society, significantly contribute to improving the efficiency of our combine, to the GDR economy and thus to implementing our party policy for the good of the people. Through the resolute work done by the party activists group, the working people became more open-minded and their commitment to this new task grew, and the state managers were impressively confronted with their great responsibility for applying these computer techniques.

Right now we are working on the use and integration of mediate data techniques in the combine's data collection, processing and remote processing system. The solutions to be found are more and more tailored to being used directly on the job, so that information and data processing can maximally be carried out simultaneously with the processes in operation. The emphasis here lies on reducing the volume of information to what is absolutely necessary and on building up simple, intelligible and inexpensive organizations permitting a drastic reduction in documentation, especially for records for wage, material and performance accounting and for invoice and delivery receipts and bills of lading. In selected enterprises model solutions for it were created. That includes:

Wage data compilations requiring little documentation were mainly obtained by reusing data obtained once. That saves 30 percent of record keeping on the average in the model enterprise. By using a picture screen technique for material disposition, machineoperated entries became possible. Except for individual entry operations, it eliminates all material withdrawal slips which in the model enterprise would amount to approximately 10,000 per month. This machine operation also released eight workers.

Material disposition is a part of the streamlined solution to be created in the field of the materials economy. Here the intention is to create lucid and effective organizational solutions by way of division of labor through involving all enterprises within the framework of a uniform organizational project and, based on that, a joint uniform ADP solution. This is an important basis for cutting back in managerial and administrative personnel.

By using new data collection equipment internally produced our enterprises were in the position to raise their data collection productivity at an average of from 25 to 30 percent. But even this is still not good enough. We must get at least a 40-percent productivity improvement here to cut back an adequate number of personnel.

Through the use of EDVA EC 1040 or EC 1055 for composing and processing text, the combine's research center was able noticeably to reduce the expense for developmental, operational and instructional documentation. A text maintenance system makes possible machine-operated changes so that more time becomes available for developmental tasks in R&D. It also cuts down the consumption of paper. Through a microfilm distributor, paper consumption was reduced further. Altogether in this case manual written work was reduced by 50 percent.

Our party's strategy for the GDR's further economic development emphatically focuses on raising the productivity, efficiency and work quality in all economic domains. That also entails the development and application of electronic computer techniques and recommendations for rationalizing the administrative work in the ministries, combines and enterprises in industry and construction, and other economic areas. In the field of administration also socialist intensification and rationalization has become the main road toward performance improvements.

### FOOTNOTES

- Erich Honecker, "Die naechsten Aufgaben der Partei bei der weiteren Durchfuehrung der Beschluesse des IX. Parteitages der SED" (The Next Party Tasks in the Further Implementation of the Ninth SED Congress Resolutions), Dietz publishing house, Berlin, 1980, p 33.
- Comrade Erich Honecker, "Aus dem Bericht des Politbueros an die 11.
  Tagung des ZK der SED" (From the Politburo Report to the 11th SED
  Central Committee Plenum), Dietz publishing house, Berlin, 1979, p 48.

- Guenter Mittag, "Mit politischem Kampfgeist fuer eine hoehere Effektivitaet, 11. Tagung des ZK der SED" (With Political Fighting Spirit for Higher Effectiveness--1lth SED Central Committee Plenum), p 131.
- 4. Cf. Wolfgang Sieber, "Intensification in Research and Development, EINHEIT, No 11, 1979, pp 1141 ff.

5885

CSO: 2300

## HOUSING CONSTRUCTION SITUATION SURVEYED

Budapest HETI VILAGGAZDASAG in Hungarian No 36, 9 Feb 80 pp 20-23

[Article by Florian Mezes: "A Key Question; Housing Construction and Housing Economics"]

[Text] Approximately half of the apartments built in Hungary between 1976 and 1980 are being built as a state investments. The second 15-year housing program, ending in 1990, similar to the preceding one, has the objective, to eliminate the quantitative shortage of housing. It is questionable whether or not this is realistic when the number of applicants for individual housing is not decreasing.

Unfortunately, it is not possible to live in numbers no matter how nice they are. The construction industry finished 47,000 more apartments between 1960 and 1975 than the planned 1 million. And the construction of approximately 1.2 million apartments is planned by 1990. Considering that there are today approximately 3.7 million apartments in the country, roughly half of the apartments will be new, or less than 30 years old, by 1990. An apartment is generally used for about 80-100 years, and thus one or two gneerations of about 2 million families will have a roof above their heads. So many apartments in such a short time have never been built in Hungary—and this is still not enough.

The number of the officially registered housing applicants alone 396,000 on 1 January of last year. In Budapest, the councils had 184,000 valid housing applications on 1 September 1979. Almost three-fourths of the applicants in the capital city have been waiting for housing for more than 3, although less than 10 years, and the number of those waiting 11-16 years also reaches almost 10 percent. The situation is somewhat better in the provinces, the waiting period being shorter, but the rents for rooms in Debrecen and Miskolc are gradually approaching those generally charged in Budapest for an apartment with services (but not total services) per 6 square meters, that is, 800-1,000 forints.

Budapest's population explosion beginning at the end of the last century has not halted to date, if anything the pace has slowed. The administrative

limitations of the expanding population only pushed the problem a few kilometers aside; tens of thousands of people are waiting in the agglomerational zone for entry, and under much worse living conditions than to be found in the capital city. Not even counting the commuters, Budapest, since almost the turn of the century has provided 15 percent more work for people than it does homes. Instead, it only offers rooms, beds or worker housing for years.

Industrialization cannot be blamed for everything but it is indisputable that the influx of agricultural population into industry has accelerated the breaking up of the traditional extended families and the separation of the generations. The disintegration of every peasant family increases by at least one—the number of housing applicants. In addition, at least until the early 1960 s—the agricultural population did not have enough money even to increase are juction, and much less the possibility for them to invest in non-product we assets such as apartments. Thus more than half of the houses in the lollands are still made of adobe, most of them being well beyond the age than can be logically expected of houses made of adobe. This is partly responsible for mass construction coupled with demolition and mass exchange of old apartments for new ones. This will not result in additional apartments, however.

Primarily because of neglected maintenance, the deteriorating condition or obsolescence of apartments is characteristic not only in the provinces but also in Budapest. Following the war, but also since 1953, rents have covered only a small portion of the costs. In 1978 in Budapest the more than 400,000 residents of council apartments paid 1.9 billion forints for rent, whereas operation and maintenance costs reached almost 4 billion forints. (Rents amounted to about one-third, but in 1976 to less than 10 percent of family income.) As a result of a lack of maintenance, the majority of old apartments should be demolished. Thus in Budapest as well as in the provinces until the beginning of the 1970 not only the continuous deterioration of the buildings but also the living conditions and the degree of comfort [services] has been unchanged. Thus in most cases to change this situation, new apartments should be built.

The situation became untenable by the end of the 1950's. It was then when the first promise was heard: at least the numerical apartment shortage would be eliminated by 1975. However the influx to the city -- more precisely, from village to town, from town to provincial city, and from everywhere to the capital city -- that is, to urban areas, was more rapid than expected. And the costs of building increased by an unprecedented degree, although the prices of materials and apartments were fixed by the authorities.

This also helped to further swell the number of applicants for state apartments and the fact that in certain forms of construction — in complexes, for example — very favorable credit availability was a small relief. If one is building this way, an average of about 80,000 forints will be needed as a down payment. In Budapest, however, the per capita monthly income in almost three-fourths of the applicant families does not exceed 2,200 forints, which means that they must put aside one-fourth (!) of their salaries for at least 5 years in order to come up with the downpayment.

The net cost of building a state apartment of 53 square meters in Budapest in the Fifth Five-Year Plan is, on the average, 411,000 forints. This includes only the costs of the building. If we also include the costs of public utilities and communal projects, then the total costs increase to almost 660,000 forints. The increase of costs is well illustrated by the fact that the construction of a 53 square meter apartment in 1976 cost 379,000-380,000 forints and the expected cost of the same will be 409,000 forints in 1980.

Apartment construction can not only eliminate the housing shortage but can also continuously replace them. The average area of state apartments under construction according to the plans will be 53 square meters until 1981 and 54 square meters in the Sixth Five-Year Plan. If we include the average area of private apartments and houses, then the total average area is about 70 square meters. This means that, when compared with actual needs, the state apartments under construction are too small and crowded. The principle, a little goes a long way, results in building more apartments with the same amount of money, but these can accommodate fewer people than larger apartments.

The councils evaluate the applications according to the present needs of the applicants. In Budapest one-fifth of the applicants who have no apartments are single people, and 61 percent are people without children or married couples with one child. About two-thirds of the state apartments have two or two plus one or two half-rooms. Thus the supply apparently meets the demand. But the majority of the 61 percent are young people who, in addition, have "pledged" to have at least two children in order to reduce the expenses. Thus it will take only a few years and 4 or 5 people will be living in a place where even just 2 or 3 can live only with a great deal of forbearance.

Economic considerations also speak against the small-apartment campaign. A bathroom or kitchen for 2 rooms costs the same one for 3 or 4 rooms. A significant part of the standing costs could be eliminated with the construction of more large apartments, as Bela Halmos writes in VALOSAG, 1977/5, "the smaller the apartment, the more basic area units each inhabitant needs, and vice-versa."

In the Fifth Five-Year Plan, about 50 billion forints of the budget are allotted for apartment construction and if we also include the subsidy for private complexes and the costs of building communal rejects, the sum will reach 75 billion. This money must be sufficient to meet the quantitative needs which — considering the present situation — actually justifies the construction of smaller apartments. According to the data of the Ministry of Construction and Urban Development, the overwhelming majority, more than 90 percent, of the applicants without apartments are entitled to 2 rooms at the most. However, of the 396,000 registered housing applicants, 122,000 already have an apartment but want to exchange it for a nicer, better and, primarily, a larger one. And the number of applicants with apartments has been increasing faster for years than the rate of decrease of those without apartments. International experience also shows that, even in the most developed countries, the demand for qualitative change is constantly increasing.

It is possible that, because of unpredictable factors such as population migration or family disintegration, the apartment shortage will not be eliminated even by 1990 and, in addition, it is easy to torecast that, even if the quantitative shortage would be eliminated, in 1990 there will be almost as many people applying for a better apartment as the present number of applicants without apartments.

According to the simple calculations of Bela Halmos, based on a 5-10-year prognosis of foreseeable demands, we could eliminate the housing shortage 1 or 2 years later if we built more large apartments. Thus the living problems of some of those who have been waiting for an apartment would not indeed be solved for another couple of years — but would then be permanently eliminated.

9414

CSO: 2500

PROSPECTS OF ECONOMIC AND TRADE COOPERATION WITH WEST DISCUSSED

Warsaw HANDEL ZAGRANICZNY in Polish No 11, Nov 79 pp 17-18

[Article by (KB): "Prospects of Economic and Trade Cooperation Between Poland and Western Countries"]

[Text] A meeting-dialogue on the economic spheres between Poland and western countries was held in Warsaw on 10-12 October under this slogan. The initiators and organizers of the meeting were the International Chamber of Commerce in Paris and the Polish Chamber of Foreign Trade (PIHZ). More than 40 representatives of industry and trade from 12 countries took part in the meeting: Austria, Belgium, Finland, France, Japan, Canada, Portugal, FRG, United States, Sweden, Great Britain and Italy. Taking part in the deliberations were representatives from the Planning Commission of the Council of Ministers, the Ministry of Foreign Trade and Maritime Economy, the basic economic ministries, the Bank Handlowy (Commercial Bank), foreign trade enterprises and industrial associations. The deliberations were chaired by the PIHZ chairman, Janusz Burakiewicz and the secretary general of the International Chamber of Commerce, Carl-Henrik Wingwist.

Chairman J. Burakiewicz, who opened the deliberations, stated that Poland has decided to achieve an open economy model in the long run. This model, the speaker stated, does not constitute an alternative for our country, but an objective necessity. In the postwar period Poland has achieved a great program of industrialization. This program has been closely connected with the assumption of broad participation of our country in the international division of labor. Unfortunately, in many ways it has not succeeded in achieving a position in keeping with the industrial potential established in our country. Therefore we are aiming at a rapid development of economic and trade cooperation abroad, and our main trump is our industry, thoroughly modernized in the 1970's. While it was possible to speak of a technological battle between the industry of Poland and that of the developed countries of the West in the 1950's and 1960's, this battle no longer exists today in the majority of sectors. Such a situation creates extensive possibilities for

cooperation between Polish industry and foreign partners, particularly in the sense of cooperation and joint ventures in third country markets. In conclusion the speaker stated: "However, it is first necessary to identify these possibilities. A climate favoring their full implementation must be created. In this regard our meeting has a not insignificant role to play."

The introductory reports presented by the Polish parties were the basis for a free exchange of opinions. On the first day of the deliberations the first deputy of the chairman of the Planning Commission of the Council of Ministers (RM), Maciej Wirowski, spoke about the "Economic development of Poland against the background of economic relations with other countries," the vice minister of Foreign Trade and Maritime Economy, Dr Stanislaw Dlugosz, spoke on the "Development of trade exchange between Poland and the West," and Director A. Dutkiewicz of the Bank Handlowy S. A. spoke on the problems of "Financing trade exchange between Poland and the West in the field of investment goods." Minister M. Wirowski devoted a great deal of attention to the basic directions of the socioeconomic development of the country in the 5-year period of 1981-1985. In this period the rapid rate of production increase in all industry will surpass the development of the machine and chemical industries. Among others, the following will develop with particular speed: the production of machine tools, machinery and equipment for mining, specialized ships, machinery for agriculture, and many products of chemistry and the light industry. We anticipate rapid development in the chemical processing of coal, the extraction of which (not counting brown coal) will exceed the level of 230 million tons in 1985. will be a further rapid development in the extraction of sulfur and the production of steel and copper. Investments for modernization will be preferred (among other things, a result of the anticipated light increment in manpower resources). A rapid increase in the number of small plants, particularly including service-type plants, will be one aim. Work associated with the program of economic management of the Vistula will be begun. In short the economic development of the country in the first half of the 1980's will create great possibilities for the further development of economic cooperation with foreign partners, including western countries.

In speaking about realities and prospects for the development of Polish foreign trade with the West, vice minister S. Dlugosz emphasized that one factor permitting Poland multilateral development of economic relations abroad, including western countries, is cooperation within the framework of CEMA. In the very near years the dynamics of trade exchange with western countries will be determined by the extent of Polish exports to the markets of western countries, particularly including exports of industrial goods of a high degree of processing, the demand for which will increase rapidly in our country. Referring to plans for the development of the raw material base in Poland, the speaker pointed to the great capital-intensity of investments in this

sector of the economy. In this connection we hope that our partners, the customers of significant amounts of Polish raw materials, will participate in the costs of developing their production in our country. The speaker also indicated the phenomenon of protectionism in western countries, seeing in it one of the main obstacles at present to the development of trade between Poland and the developed countries with a market economy. The condition for the favorable development of mutual economic relations is the use of maximum privileges in access to markets, active bilateral marketing and, above all, respect for one of the basic principles of the CSCE Final Act, in the sense of which structural differences must not be an obstacle to economic and trade cooperation.

The second day of the meeting-dialogue was opened by an address by the minister of Foreign Trade and Maritime Economy, Prof Dr Jerzy Olszewski. The head of this ministry presented the assumptions of the strategy for Polish foreign trade in the coming years, devoting particular attention to the consistency with which Poland is reducing the negative balance of trade turnovers with the developed western countries. The process of equalizing exchange with the West will be continued, and the results achieved during this period will be affected by many factors, such as further modernization of industry, development and a rise in agricultural efficiency, modernization of transportation and so on.
Minister J. Olszewski answered many individual questions posed by dialogue participants from western countries.

Another part of the deliberations proceeded under the slogan of problems in cooperation. Docent Dr E. Tabaczynski from the Institute of Trends and Prices in Foreign Trade (IKiCHZ) spoke on "Industrial cooperation between Poland and the West (with consideration of small and medium enterprises)," and the Director General of the POLIMEX-CEKOP foreign trade enterprise, L. Lachowski, spoke on "Trilateral cooperation: Poland-West-developing countries." Both reporters stressed the need to use privileges and preferences in this type of cooperation. Poland concluded a number of undertakings with western countries, aiming to activate cooperation with medium and small enterprises, but only France and Italy could be mentioned with regard to concrete results. Therefore the great possibilities of cooperation with enterprises from the other western countries should be used. For the most part the trilateral cooperation among Poland, the developed western countries and the developing countries was the result of initiative from the Polish or western enterprises. Most of the time the partners from the developing countries were assigned the role of performing simple work, without regard to their growing ambitions and capabilities. The trilateral cooperation with developing countries will only acquire due prospects if all partners are assigned tasks which completely satisfy them. This principle should become the basis for all future programs of cooperation between Poland and western countries in third country markets.

As the joint communique stated, the discussions during the meeting were carried out in a climate of trust and mutual understanding. Many problems were brought up in it, but we shall only mention the most important of them. They included the matter of marketing Polish commodities in the markets of the western countries and vice versa, the matter of eliminating continuing obstacles to mutual trade, the question of financing exchange of investment goods, problems in the development of Polish agriculture and in this connection the prospects for exporting agricultural and food articles from Poland, questions of Polish requests for foundry products to be imported in coming years, problems in the development of Polish partnership of mixed capital abroad and the share of foreign capital in joint ventures on Polish soil. The problems broached during the dialogue aroused serious interest in cooperation with Poland on the part of the representatives of western countries.

In the addresses summing up the 3-day deliberations both chairmen, J. Burakiewicz and C. H. Winqwist, stressed the open nature of the Warsaw dialogue, the wide range of problems brought up during it and the benefits which meetings of this type bring to both parties. This thought was expressed in the joint communication issued at the conclusion of the deliberations in which, among other things, it was stated that "both sides recognize the importance of better understanding of problems and conditions in which each of the parties operates," and that "the results of the meeting have confirmed the usefulness of this dialogue and the expediency of organizing similar meetings in the future as well."

On the last day of the deliberation the leaders of the delegation from the International Chamber of Commerce were received by the vice chairman of the Council of Ministers, M. Jagielski. The chairman of the PIHZ, J. Burakiewicz, participated in the meeting.

6806 CSO: 2600

## POLISH-NIGERIAN TRADE PROSPECTS NOTED

Warsaw NASZA TRYBUNA in Polish 2 Apr 80 p 3

[Interview with Jerzy Sartowski, commercial counsellor of the Polish People's Republic Embassy in Nigeria, by Marek Zurawski: "Nigeria--An Increasingly Closer Partner"]

[Text] [Question] Mr Counsellor, independent Nigeria is a young state--what is its economic situation?

[Answer] It is just coming to the end of the implementation of the 5-year economic plan, the purpose of which was the creation of an infrastructure in such fundamental fields of industry as the exploitation of raw materials, transport, and electrification. The years 1976-1980 were also to prepare a starting point in the next period for the construction of a modern industry on a large scale. These are bold prospects and it must be remembered, however, that Nigeria is an agricultural country. Approximately 60 percent of the population of the country is connected with agriculture. It is only recently that a portion of the population is moving from agriculture to the more modern branches of industry, especially those connected with the extraction of crude oil, the share of which in the national income and exports is approximately 90 percent. It is worthwhile to mention also that Nigeria is the sole producer of coal in Western Africa...

[Question] How do our contacts to date with Nigeria look?

[Answer] Poland was one of the first countries which recognized independent Nigeria 20 years ago. It was also the first country which concluded a trade agreement with it [Nigeria]. In the beginning, trade exchange was limited to selling to Nigeria goods in daily use. In time, these imports became restricted by the Nigerian side in order to permit the development of native production. During this time our exports to Nigeria were not very large. The situation changed when we entered the Nigerian market with industrial investments. We began from the mechanization of mines and the construction of a coal processing plant. These first tasks were evaluated very well and were followed by further orders. The Poles not only modernized the Nigerian coal industry but also took part in the construction of the pipeline and the

refinery. A contract was signed recently for the construction of a glass works and the electrification of 58 Nigerian localities, as well as for the delivery by the Polish side of 45 fish cutters. The value of just these three understandings exceeds U.S. \$100 million. We expect to finalize further contracts soon which can significantly increase the value of our exports and will place Nigeria among the leading partners of Poland in the Third World.

[Question] Do many Poles work in Nigeria...?

[Answer] Of course. Polish specialists who are sent to Nigeria by the POLSERVICE Foreign Trade Enterprise on the basis of individual contracts constitute a significant group. Beyond the large group of engineers of various specialities, there are also doctors and lecturers working there. This cadre enjoys a very good reputation which is advantageous to the further development of scientific-technical contacts. At present, there are approximately 450 specialists in Nigeria on individual contracts. On the other hand, in Poland, there are several scores of Nigerian students in various types of studies and in post-graduate schools.

[Question] What commodities are imported from Nigeria to Poland?

[Answer] One of the most important commodities exported is cocoa bean, which Poland purchases traditionally, though via the London [commodity] exchange. Last year, we signed the first contract for the delivery to Poland to 500,000 tons of Nigerian crude oil. The implementation of that contract began last year. It must be added that Nigeria could also be an interesting supplier of other commodities for Poland, primarily rubber and cotton; there is the possibility that we will be buying them in the future.

[Question] Our cooperation with Nigeria is also implemented through Polish-Nigerian commercial firms...

[Answer] Mixed companies are operating on the principle of capital links. That form of cooperation has a good record. The first company, DALTRADE, Ltd., was of a commercial nature and was established in 1962. At present, there is a tendency of changing over from commercial companies to production companies. The primary aim on our part is not, in this case, the attainment of high revenues, but the implementation of the actual needs of our Nigerian partner. At the present stage, this is normally production, organizational, and various types of consultation assistance. The recently-established companies are tasked, inter alia, with the expansion of the timber industry, carrying out electrification work, the production of specialized tools, etc.

[Question] What prospects do you see for developing our trade contracts?

[Answer] The building in Nigeria of the infrastructure in many branches [of industry] continues to be considerably advanced, and that is why we will be giving increasingly more attention to the exports of complete industrial installations and the sale of technical know-how. This pertains to such large undertakings as, for example, the construction of ports and shipyards

as well as small plants which are being established by the co-participation of the production companies with the private sector. Despite the considerable increase of the State sector, it must be remembered that 30 percent of the industrialization in Nigeria will be implemented by private capital. Beyond the various types of construction, the greatest prospects on the Nigerian market will be in agencies exporting industrial equipment, machinery, and complete plants.

Thank you for the interview.

CSO: 2600

'EXTRAORDINARY TOLERANCE' OF IMMORAL BEHAVIOR CONDEMNED

Warsaw TYGODNIK DEMOKRATYCZNY in Polish No 10, 9 Mar 80 p 20

[Article by DW: "Who Bothers With Morality?"]

[Text] It took place thus: a certain section chief installed a microphone in the room of his workers and taped their discussions; he had thus organized for himself a small and private bugging operation. Krystyna Jagiello describes this matter in an extensive report in LITERATURA [No 9, 28 Feb 80 pp 5, 6], titled "Microphone in the Radiator." She places this episode not somewhere in Poland, but in a definite location, in the Harvesting Machine Factory in Plock, where it took place. The author does not concentrate on the legal aspect of that fact, although the matter went to the regional prosecutor for resolution. He, however, did not take it to court, but only "pushed it down" to the factory, enjoining them to exact disciplinary penalties (these penalties turned out to be a verbal reprimand!). She relates, however, in detail the numerous discussions which she had in the factory, the reactions of various persons to that "occurrence," and their evaluations and views. And at this moment it ceases to be important where the matter takes place. The names which are cited, the name of the factory, and the name of the city fade away and what remains is a sad reflection concerning an important problem: the extraordinary tolerance toward socially harmful phenomena.

Some said that the section chief "had not behaved nicely"; some of the persons—the one installing the bug, for example—wanted to turn the entire matter into a joke; and still others judged his action as a harmless escapade. The worker who discovered the bug and got the matter rolling was advised by her office colleagues to drop the whole thing if she wanted to continue working there, because the chief might do her injury to get revenge. "You are altogether too sensitive. You bother so much with that morality. From that time I constantly heard similar words...," says the worker. The author of the report also heard such words. Many people did not understand why a journalist was "making a needle into a pitchfork" and why, to describe such a trifle, she used big words: limiting of freedom, honor, personal dignity, violation of the rights of the individual, impermissible methods, etc. The department director to whom that "merry" section chief was

subordinated said, "Next to the great things going on around us, Madam, in comparison with our tasks, the matter about which we are talking is minor..." And the managing director of the factory, as if justifying this, added, "I will tell you, Madam, people are really so harried and now they think only about those few concrete things upon which their work and their existence depends... We talk here primarily about production, for the sake of which—no point being wordy about it—a man frequently bows his head. Perhaps too much..."

These last opinions of the director could be recognized as a commentary on Krystyna Jagiello's whole article. Only it is said that in the Plock factory—and, unfortunately, not only there—hardly anyone understands that, in the course of those "great things going on around us" and those concrete things, man and that which is most valuable in him get lost. Frequently morality gets lost somewhere, without which the proper inter-personal relations in a plant do not exist.

CSO: 2600

## INVESTMENTS NEEDED TO REPLACE OBSOLETE CHEMICAL EQUIPMENT

Warsaw ZYCIE GOSPODARCZE in Polish No 11, 16 Mar 80 p 9

[Article by Lech Froelich: "In Order That Chemistry Might Be Young"]

[Text] The chemical industry belongs among the basic branches of the national economy. The development of chemical industry and the rate and the directions adopted for this development are in turn factors which condition and at the same time objectively constrain the development of almost all branches of our economy. With increasing frequency the noticeable shortage of chemical products, coupled with the simultaneous appearance of marked curtailments in the investment sphere, has drawn attention to the necessity of an improved maximal utilization of existing production capacity.

Owing to characteristics of chemical industry, of which it is often said that it is a "carrier of technical progress," technological and physical aging of the productive apparatus occurs with special rapidity in this branch. The global advance of chemical technology, and also the aggressive materials with which chemistry frequently works, bring it about that installations which "today" are up to date require replacement or reconstruction after 10 to 15 years.

In 1976, the gross value of fixed assets in chemical industry came to 192 billion zlotys (at current prices). This placed this industry in the third spot in the country, after the fuel and power industry with fixed assets valued at 441 billion zlotys and the electrical machinery industry which disposed of fixed assets valued at 395 billion zlotys. In 1978 the value of fixed assets of chemistry rose to 257 billion zlotys, and it can be assumed that at the present it has already exceeded 300 billion zlotys. In the production structure of chemical industry the markedly large share of the so-called heavy chemistry is notable, a branch which disposes of complicated heavy equipment and whose processes take place in aggressive chemical environments (sulphuric acid, ammonia, soda, chemical fertilizers, petroleum products, chemical fibers, and the like).

The development of chemical industry in the years 1971 to 1976 was directed towards these "heavy" sectors of chemical production. This caused a rise in the capital intensity indicator of this production. In order to gain additional output of one zloty in 1976, it was necessary to invest 1.46 zlotys (as against 0.78 zloty in 1971). In result the chemical industry has a high ratio of production equipment per unit of labor. Thus in 1978 one worker of the industrial group had at his disposal, on the average for all of chemical industry, fixed assets with a value of 726.9 thousand zlotys and could produce with the help of these assets products worth 939.8 thousand zlotys (at sales prices) or, if we consider value added, could "add" a value of 177.4 thousand zlotys to national income.

In spite of the investments this is not a young industry. On the basis of a survey it has been established that of the 147 enterprises and plants which fall under the jurisdiction of the chemical industry ministry only 45 were established after 1945, and only 7 in 1971-1975. Machines, equipment and installations that have been in operation for many years are to a significant degree used up. Measured on the basis of amortization value, the span of utilization of a significant part of the assets in operation in chemical industry exceeds the 15-year upper limit of rational operation. The operation of over-age and worn-out machines and installations alongside modern production equipment significantly lowers the overall operating efficiency. In the case of breakdowns and repairs of the old equipment, the modern installations linked to it also stand still and do not work.

The need for modernization and renewal investments in chemical industry stems equally from economic, technical, and also social arguments. Modernization undertakings reduce the requirements for living labor. At the occasion of reconstruction, energy—and also material—saving processes can be introduced.

Above all, however, a better utilization of raw materials provides a real possibility for improvements in the supply of [consumer] markets with chemical products (paints, varnishes, man-made fibers, pharmaceuticals, detergents, cleaners, cosmetics, rubber goods), and also for improvements in cooperative [inter-industry] supplies which have an influence on the continuity of the operations of other industrial branches and of transport, agriculture and housing construction.

How has this matter of modernization and renewal investments been shaping up in our country until now?

In Polish chemical industry the share of these investments comes to an estimated 25 percent, whereas in highly developed countries it reaches 50 percent. A certain improvement has been observable in 1973-1974, when the new economic and financial system began to be introduced in the majority of the enterprises and associations of chemical industry.

The share of "own investments" of economic organizations in the total sum of investment outlays of the sector increased at that time from 5 percent to 10 percent, and even to 20 percent in 1979, which permitted the implementation of the most important modernization and renewal intentions. However, in the years 1975 to 1977 the situation reverted to its former state, and the volume of expenditures on the replacement of worn-out fixed assets fluctuated within the range of 2.6 to 3.9 billion zloyts. If we compare these figures with the total value of fixed assets we can state that at this rate their complete renewal would require some 50 years!

Modernization investments have not enjoyed much sympathy until now, and this not only in the chemical industry, for a number of reasons: this work is performed in plants which continue to be in operation, it complicates life, the additional labor outlays cannot always compensate financially, and it does not attract visible prizes and awards.

Today this is a necessity and the only real development path. It may bethis is something to which the managers draw attention—that the creation of new financing sources for renewal processes, the creation of the possibility of reconstructing machinery and equipment out of [the enterprises'] own funds of retained savings, will prove to be appropriate approaches.

The acceptance of the development of chemical industry by means of renewal investments requires a production base for machinery and equipment for this industry. The national output of chemical machinery and equipment is not large. As we know, the CHEMAK association of the heavy and agricultural machinery ministry, which specializes in the production of machines, equipment and apparatus for the chemical industry, directs the bulk of its output into export (sugar mills, sulphuric acid factories, hardboard plants). And this is a good thing.

Once we have developed our own original technology in some sectors of chemistry (and in related fields) and once these developments have gained recognition on foreign markets and attain good returns in export, we must support and expand these disciplines.

However, this leaves open the question, who is to supply the installations, often one-of-a-kind installations, for domestic industry, and especially for renovation investments? The METALCHEM Association for the Construction of Chemical Apparatus, which was created not so long ago within the framework of the ministry for chemical industry, is not yet--and perhaps will not rapidly be--a producer capable of supporting the development of the sector. The production base for chemical machinery, equipment and apparatus which has been built works primarily for the current needs of the industry. It thus seems that without a linking of the efforts of CHEMAK and METALCHEM, and also the cooperation of other domestic producers of chemical apparatus, it will be difficult to deal with the technological renewal of Polish chemical industry.

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ERRATUM: This is a corrected version of article which appeared in JPRS 75199, 26 February 1980, No 1982 of this series pp 132-136.

POLAND

## CONSTRUCTION MINISTRY OFFICIAL INTERVIEWED ON EXPORT POTENTIAL

Warsaw FUNDAMENTY in Polish No 50, 16 Dec 79 p 5

[Interview with Undersecretary of State (Ministry of Construction and Construction Materials Industry) Zdzislaw Grela: "Export--Also for the Country"]

[Text] [Question] The guidelines set down at the 8th Congress of the Polish United Workers Party stress the need for the pro-export development of our economy, including the intensification of construction export. But will this not threaten the full implementation of the housing program? The requirement included in the Congress Guidelines of shortening the period a citizen waits for an apartment made less attainable because of this?

[Answer] With complete responsibility I am able to state that the development of construction export does not take place at the expense of diminishing the potential necessary for implementing the housing program or any other urgent domestic task. Quite the opposite: this export is an important factor in the growth of this potential.

It is sufficient to observe the results of the domestic activity of our largest construction exporters. Their results are always better than the results of construction organizations and enterprises which do not conduct work abroad.

The reason for this is clear: enterprises which send their workers abroad do not encounter problems with staffing at a properly qualified level. Also, they do not experience significant problems with discipline or work organization. The condition of departure for foreign construction projects is, furthermore, the suitable training for good work domescically.

[Question] But not only people determine building capabilities of contemporary construction....

[Answer] Yes. It is even possible safely to say that machines operated by a high class of specialists decide. Therefore, the level of providing an enterprise with modern building equipment—from electrical tools to complicated mechanized equipment for the entire technical process—decides. Moreover, besides materials personnel qualifications decide the degree of building potential.

But the level of providing the construction industry with modern equipment depends upon the means which the national economy can appropriate for this purpose. Additional means can only come from construction export revenues.

And here lies the crux of the matter: enterprises expanding construction export obtain additional possibilities for purchasing construction equipment which can be used for domestic needs. In addition, foreign exchange allows them to select the most modern and productive equipment, thereby guaranteeing high-quality work. This, among other things, is determined by the impact of exports on increasing the possibilities of the domestic potential.

[Question] The Guidelines of the 8th Congress call for a growth in housing construction but also a reduction in industrial investment for the next five-year period. Does this indicate that the reduced share of the potential for industrial construction will be able to provide housing construction as well as export construction?

# [Answer] Certainly!

It is simply necessary to adapt oneself better and more elastically to situations and conditions in which we will take action. In this respect, conditions are changing not only in the country, but also on foreign markets. Today it is not enough to complete construction on time. Our clients are more and more demanding. Nowadays, construction performance must be of the highest quality in order to cope with increasing competition. Therefore, our domestic construction enterprises must prepare themselves for export work with ever greater versatility. Those enterprises which fail to achieve the necessary high level will not be able to compete for participation in export construction.

[Question] Material capabilities are likewise a barrier to the growth of housing construction. Can you explain the role they play in construction export?

[Answer] Materials for use in construction export are sold to the extent that they are available. Therefore, contracts currently negotiated by us do not include supplies of construction materials which are scarce in Poland. This includes steel, and in periods of no surplus, cement also. As a rule, this also applies to cables and timber.

However, when speaking of materials I must add something else. In the course of construction work abroad, we have the opportunity to export—within the framework of the value of finished installations—such materials which could not be exported individually, simply because no one would import them.

Occasionally, construction export also serves to promote the export of our construction equipment, since the type and quantity of equipment necessary for completing a project are specified in drawing up the contract, and its cost is an integral part of the sold installation's price. In most instances

this is domestic equipment. It was in just such a manner that the "entry" of Polish construction machines into the attractive Iraqi market first took place.

[Question] What is the current volume of Polish construction exports and who are the recipients?

[Answer] The volume of exports to particular countries is calculated by the value of sales. Altogether, the value of this year's construction exports, not counting exports to the Stylet Union, will total 1.5 billion foreign exchange zlotys, of which more than 70 percent from socialist countries, and the rest from free exchange.

Traditionally, our biggest recipient is Czechoslovakia, and then East Germany and Hungary. Exports to the Soviet Union, a large scale operation, have a somewhat different character.

For the most part contractors from Poland participate in the implementation of large investment ventures undertaken within the framework of interstate agreements and also within the framework of accounts for delivery of Soviet raw materials and, recently, electrical energy for our economy.

Among countries of the so-called second payments area, the recipients of our construction exports include Libya, Iraq, Iran, West Germany, Algeria, Yemen, Kuwait and Nigeria. Iraq and Libya, who account for more than two-thirds of the free exchange turnover, are our chief customers.

[Question] Is it possible to talk about Polish construction's export specialties?

[Answer] Of course. The construction of power facilities for which a huge, worldwide demand exists, is the first specialty. In this field we have considerable success. We are respected. Currently we are filling several contracts for the construction of power plants with Polish equipment entirely. This includes a turn-key plant in Czechoslovakia. Construction of power plants currently comprises 35 percent of the assignments completed by the "Budimex" agency.

We possess great experience in the construction of the most complicated power pipelines. We enjoy an excellent reputation. I think that in the near future we will begin to profit from this extensively.

Drainage work and construction of building materials plants and food industry plants also are included among our export specialties. We shall also export Polish factories for making house components.

In all, 65 percent of the orders which we are fulfilling consist of industrial construction, 22 percent specialized construction and 13 percent general construction. Although we accepted the principle that the object of export is not general construction, we would reverse it in the case of Libya because of important economic reasons for our country.

[Question] You mentioned that our constructors enjoy an excellent reputation abroad. Visiting Polish construction sites abroad and talking with representatives of investors who commissioned the projects, I, personally, encountered such an opinion. Both the quality of installations constructed by Poles and the tempo at which they were constructed evoked their real recognition.

It is well known that domestically there are significant troubles in this sphere. I do not believe that this is simply a matter of wages....

[Answer] Of course not. Relatively higher wages compensating for a trying separation from family and home is not the most important thing here. To be sure, it helps to preserve a high standard of labor discipline, but it does not predetermine the results which were achieved.

Foreign construction has at its disposal modern technological equipment and high-quality materials. Furthermore, it works with the most modern application of technology. Also, the work organization there is exemplary.

[Question] What conclusion for domestic consumption can be drawn from that?

[Answer] Experiences gained in foreign construction are valuable. After all, this is yet another positive aspect of the export activities of our construction people.

I have already mentioned that construction enterprises engaged in work abroad have much better domestic results. Not only additional equipment secured from the revelue for export helps to achieve this result, but better organization of work also contributes.

Valuable comparisons are also obtained from export construction. These are very useful for devising principles for work organization at domestic construction sites.

[Question] Poland is not only an exporter, but also imports construction services. Are these imports necessary? Indeed, on many occasions, foreign forms have engaged in work identical to that performed by Polish constructors abroad.

[Answer] We are opposed to the importation of construction. At this very instant our construction industry can build any kind of installation, even the most complicated. We know how to build quickly and according to present day requirements. We feel that the resources expended for the importation of construction should be, in part, earmarked for purchase abroad of appropriate materials and equipment. I emphasize in part, because of the entire expense of organizing and executing the work of many materials available in the country would place no burden on the foreign exchange balance.

On the basis of these assumptions, and taking into account the current capabilities of the building industry, the importation of construction-assembly work into our country ought to be eliminated.

[Question] A few days ago I read an interview with the director of the Warsaw "Orbis" hotels. He complained of a lack of willing people to undertake work connected with the major renovation of the "Bristol" Hotel. An announcement was also made about bringing in a foreign contractor.

[Answer] We have the following offer to all investors intending to purchase construction installations abroad. We will undertake the construction of every installation, guaranteeing prompt completion and a quality of work identical to the foreign proposal. Besides this, our price is 5-10 percent lower!

[Question] This is an interesting offer, perhaps also for "Orbis."

[Answer] The hotel "Poznan" in Poznan may serve as our showplace in the sphere of hotel building. We built it from materials almost exclusively of domestic origin.

[Question] From materials which I obtained before our conversation, it appears that all exports achieved to date by the Foreign Trade Agency of Construction BUDIMEX takes place on a cash basis. This is a considerable accomplishment. But on the world construction market more and more frequently purchases are made on credit. Is there no anxiety over this type of barrier?

[Answer] It is difficult to deny that the majority of transactions in world trade are negotiated on credit terms. This applies to construction export also. Incidentally, as a rule, cash transactions mean lower prices. As you rightly observed, we do not have any credit construction, and we realize that the country is not able to provide credit for construction exports. And this reduces our chances. Thus, we are considering the possibility of undertaking export ventures on the basis of credit negotiated in another country.

[Question] What kind of qualities are represented by Polish construction on world markets?

[Answer] Our great capital is our experience and the good opinion of our clients. The high evaluation of our activity in Libya and Iraq stands as an example. And, after all, a good position on the construction markets of Arab countries counts heavily today.

[Question] In any case, it helps in the fulfillment of increased tasks.

[Answer] We will make every effort to increase construction exports. This has additional significance for the economy since our construction activity abroad frequently opens the way-especially in developing countries-to exports of many Polish industrial articles.

[Wernicki] Thank you for the interview.

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#### ROLE OF CREDIT IN SELF-ADMINISTRATION EXPLORED

Bucharest REVISTA ECONOMICA in Romanian No 2, 11 Jan 80 pp 10-11

/Article by Nicolae Pretorian /

/Text/ The continuing process of development and diversification of the Romanian economy, as is natural, also involves improvement in the action of the economic categories. Under the conditions of placing economic activity to a greater and greater extent within the framework created by the introduction of the principles of self-leadership and self-administration, a primary necessity is to use more fully the value categories such as monies, credit, price and interest. Fulfilling the basic goal of Romania's social-economic development for the 1981-1985 period, as was approved by the 12th party congress, requires a general mobilization of all the production factors so that a new quality is achieved throughout social-economic activity.

Increasing economic efficiency, one of the directing lines of our economic development, among other things, is supported by the operation of the credit mechanism under the best possible conditions, credit being the main tool of economic policy. Credit becomes a basic element in achieving self-administration both at the macro- as well as micro-economic level, with intervention and its good operation playing an important role in the balanced progress of economic activity. Even more, we can state that if the plan marks out the balanced development of the economy, establishing the necessary tasks and goals to be achieved during a certain stage, through credit and monies it is sought for the balance established through the plan to be respected in executing it, while the new phenomena which appear and which will be reflected in the evolution of credit should be analyzed on a timely basis and, according to the case, should be encouraged or discouraged through measures adopted by the factors which participate in social and economic activity.

The high rates of development of the Romanian economy for the 1981-1985 period will broaden the activity in the area of credit and money circulation. Under conditions of the sustained ground of industrial production and volume of investments, the banks will be called on to increase the volume of credits they will give to the economic units, in this way creating the quantity of money needed for the uninterrupted circulation of goods and services. By assuring an exemplary organization of crediting operations, it is very important for the banking system to continually seek for the volume of credits and quantity of money which appear through it to be in close correlation with the development of material production. The application of the principles and measures established by the new economic and financial mechanism under good conditions at all levels of the economy will be of capital importance for assuring an optimum ratio in economic development and the evolution of credit and money circulation.

The importance which must be given to credit proceeds from the fact that in our economy, under conditions of the existence of credit monies and production of goods, credit is the main form for issuing and placing monies into circulation. By giving credits, the bank creates (produces) monies which then are used by the participants in social production to carry out economic activity. Once issued and placed into circulation, the monies create purchasing power for those possessing it, thus participating either in the circulation of goods achieved or in the savings process.

Monetary circulation actually is regulated through the mechanism of giving and paying back credits, thus assuring that the volume of monies in the economy is as close as possible to the optimum level desired

By creating monies which in turn create purchasing power, credit acts within self-administration as one of its basic elements, as a barometer which continually shows in what direction action should be taken to fulfill the plan tasks and to assure the balanced development of activity both at the level of each unit as well as of the entire economy.

Achieving economic and monetary balance requires that the issuance of money and credit is closely connected with the development of the economic processes and that the money placed into circulation through the crediting mechanism is the result of activities resulting in goods and useful services for the economy and the population. In this context, the concept of "covering" money is basic for a healthy economy.

The planned leadership of the economy and the opportunity for some negative aspects in the economy to be discovered effectively with the aid of credit, however, do not exclude the fact that, in certain circumstances, some mits produce goods which temporarily cannot or never can be utilized, thus giving rise to the phenomenon of stocking or tie-ups. Just as negative is the fact that some units do not succeed in covering expenses with the price obtained from utilizing products in their entirety, registering negative financial results. Giving credits in these cases places the bank in the situation of creating a money, the covering (guarantee) of which is doubtful. The fact that sometimes credits still are being given to enterprises which have these shortcomings should be viewed with greater reservation, with such cases having to be treated as undesirable things for the bank.

redit has an important role as a result of its participation in the finaning of circulating resources and in completing the economic unit's own assets. The fact that currently around 50 percent of the assets needed to carry out production activity and circulation is assured through credit gives the banks the opportunity to closely follow up on the way in which the plan tasks are being fulfilled by each unit and take action with specific resources in order to respect plan and financial discipline and fulfill the conditions for the good operation of self-administration.

A first condition which must be respected in giving credits to finance the circulating resources refers to the need for it to fit into the planned limits. This condition is very clearly regulated by the Law on Finances, which provides the banks' obligation to fit into the credit plan approved and the ceilings approved for each economic unit. The problem of fitting credits into the planned limits has a direct link with the way of distributing and utilizing the national income and seeks assurance of the balance established through the plan during the economic activity.

It is known that a portion of the assets for social-economic development is distributed and utilized for increasing the circulating resources needed to achieve the production established by the plan. Their own assets affected by the enterprises and those eventually received from the budget as well as the credit should assure the financing of the growth in circulating resources planned from one period to another. It is easy to understand that anv tendency to increase the circulating resources beyond the level provided with the distribution of the national income changes the structure established by the plan and, according to the case, affects the development assets intended for financing of investments or the consumption assets. For that reason, the technique of giving credit to finance circulating resources should proceed from the need for the volume of assets and, thus, the volume of credits in each unit to fit into the level established by the plan.

In practice there are situation, where some economic units, due to some short-comings in material-technical supply and failure to respect the established production time and producing some products without sale or failure to fully recoup the expenses made, arrive at the situation of no longer being able to cope with the current obligations for payments to the partners and, as such, they arrive at the situation of requesting supplementary credits beyond those established on the basis of the plan tasks.

In this connection some things should be mentioned which fit into the area of principles. First, it should be shown that the concept of self-administration, among other things, requires that an enterpirse carry out its activity with a well-defined volume of assets. Appropriate supply, assuring a normal rate of production and producing products which have their utilization assured are obligatory conditions for carrying out self-administration in practice. Not only respect for the planned level but speeding up the rotation of circulating resources, which in the end must mean reducing assets in the production and circulation sphere, are one of the directing lines of our party's economic program. Economic efficiency in the area of utilizing circulating resources is made specific in the end through producing superior products with the smallest assets.

Second, a direct consequence of slowing the speed at which the circulating resources rotate is reflected in the reduction in the payment ability, difficulties in making the discounts and the appearance of a chain blockage. This is an undesirable situation and both the bank as well as enterprises must make efforts to prevent it. Once such situations have appeared, the solution for resolving it must be found by the enterprise, which should bring the situation back into balance through effective actions and should unblock the tied-up assets and not allow supplementary assets to be drawn into circulation through credits. The fact that the Law on Finances has provided for the possibility of some enterprises in certain cases to be anle to receive credits for temporary needs or credits to rebuild the payment ability should be viewed as an exception and not as a right of the enterprise before the bank. Regardless of why they must be given or what they are called, supplementary credits have the disadvantage of being reflected by causes which act in the direction of slowing the rotating speed of the circulating resources and, as such, should be given carefully. For that reason, the reasons for which such credits are given are well-defined in the Law on Finances, while the term for utilizing them is limited.

The problem of fitting the credits into the planned level also has another aspect. It should be clear to the organizers of the production process that respect for the planned level or speeding up the rotation of assets has the same value from the viewpoint of economic efficiency as reducing the consumption of materials. It is economically desirable for the savings process to be accompanied by a reduction in the stocks being held at the disposal of production.

The new economic-financial mechanism being applied in our economy has introduced the budget of incomes and expenses as a means of leadership of economic activity in each unit. Thus the possibility exists for the volume of credits needed to be established in direct relationship with the reality of each unit. Establishing precise conditions and criteria on which basis the volume of credits and means for giving them should be determined is one of the basic factors in introducing a severe discipline in the utilization of assets intended to finance the circulating resources. In this framework, an important role should be played by the credit contract.

The introduction of the credit contract should be viewed by the enterprise and by the bank as an opportunity for analysis, for preventive negotiating of establishment of the volume of credits needed, the documentwhich establishes the rights and duties for both sides.

On the basis of what has been shown regarding the responsibility the banks have when they give credits and when they actually create the new needed for the production and circulation process, the banks are closely concerned to have each enterprise assure conditions so that economic activity takes place normally and that the bank-money-bank circuit takes place under good conditions. This is because for the bank not only are the conditions in which the credits given important but, in particular, assuring the opportunities for paying them back. If giving credits means that the money needed

by the economy is created, paying it back assures that the money which has fulfilled its job is taken out of circulation, in this way assuring an optimum level for the quantity of money in circulation.

In carrying out crediting relations and, thus, in establishing the contractual clauses, the bank is empowered by law to refuse to give credits requested by economic units in case the products being executed do not have their sale assured through domestic or export contracts. In certain situations, when some enterprise leaders cannot present measures when the contracts are concluded which guarantee repayment of the credits, it can be requested that they also be signed by the industrial centrals or holding ministries, however the banks retain their right to refuse to give credits if the measures presented are not able to assure normal flow of activity and assurance that the credits are paid back.

Resulting from this is the particularly big role being given to credit and to the banks in the process of financing production and goods circulation. As a result, the banks must have an important voice in connection with the way in which the principles of self-administration are applied in each unit separately, discovering on time the causes where all conditions are not assured for the normal flow of activity. However, it is required that a growth in quality also take place in banking activity so that each banking organ is able to fulfill the important role belonging to this institution in applying the principles of self-administration.

The crediting activity carried out by the banks places them in close connection with the economic units in order to assure them the necessary assets through credit for fulfilling the plan tasks. For this the banks must have good knowledge of the way the activity in each unit is organized and is carried out and, thus, they must carry out a check on this. The task of having the bank carry out the check derives from the social and economic responsibility it has when, by giving credits, it places into circulation a certain quantity of money with whose aid the production and circulation of goods is achieved.

In this context banking check is a basic function of credit while the exercising of it, far from being merely a safety measure on the bank's part, is more a need of primary economic urgency.

The bank—and, thus, the operations it carries out—represents an important lever in the state's hand in the struggle to implement economic policy. A cooperation and collaboration must be achieved between general economic and the banks' activity under conditions where the bank should not give up its main goal of supervising and influencing the way in which public money is utilized. Since credit is an important tool of economic policy, it has precise rules of action. For that reason, giving, guaranteeing and paying it back are the basic principles of monetary activity.

Under the conditions of applying the principles of self-leadership and selfadministration, the workers collectives have greater tasks and responsibilities in their double quality as owners and producers to take all measures for the good utilization of material and monetary assets. This in no way reduces the banks' responsibility; by giving credit for the production and circulation of goods, they also must make a detailed check of the way in which each enterprises carries out its plan tasks. Banking check through credits must be viewed as having a constructive nature of aiding the enterprises in finding solutions which continually lead to the improvement of work in the economic and financial area and to increasing efficiency in the utilization of material and monetary assets entrusted by society.

Proceeding from the duties the banks have in carrying out the check in the economy, this matter has been formulated clearly in the Law on Finances: "The banks are required to check on the way in which monetary assets are established in the name of the state and in order to defend its interests and keep records of them and the way that reterial and monetary resources are used by the socialist units and to take measures to identifythe new opportunities to increase the incomes, have complete receipt of the rights of the state in lei and hard currency and on schedule, have expenses in a strict savings program and in accordance with the intention established by the plan and assure that the credits given are repaid on schedules."

Checking through credits must be conceived of as being almost exclusively preventive. The bank should be informed of the enterprise's economic-financial situation and establish the way in which it will utilize and pay back the credit before giving it. The basic point in the crediting process is when the bank decides to give the credit requested or not and create purchasing power for the enterprise through the monies it issues when it gives the credit. After the credit is given, the bank still can supervise the way in which the enterprise given the credit is respecting the obligations taken; however, it no longer may take action with the same force in case the monies received by the enterprise through credit were used for less economical purposes. Practice has shown that the actions taken by the bank and even by the enterprise to repair some situations where monies were used inappropriately by the enterprises require a certain time, a period in which both the enterprise's administration as well as the general situation are affected negatively.

In this framework we support improving banking checking in the sense of increasing the preventive and guideline nature of the enterprises in carrying out their economic activity. Improving banking checking should proceed from the goals and tasks for the future of the national economy in order to be able mobilize all efforts and all factors in assuring conditions for the effect flow of economic and financial activity. The tendency sometimes demons ated for banking checking to do "everything" may lead to an orientation toward secondary aspects, which reduces its efficiency. Also contributing to this situation is the fact that financial-administrative checking which should be carried out along the line of the ministries and centrals recently has been insufficient and has avoided approaching the financial problems and problems of efficiency more fully.

Checking, like any other aspect of leadership activity, has a well-established purpose, purpose which fits into the party and state economic policy. It should contribute to the sensible management of assets, combatting of any form of waste and application of a strict savings program and to achieving the largest possible volume of goods production and of higher profits, the single source for increasing the national wealth and raising the population's standard of living.

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## RESOURCE RECYCLING PROGRESS COMPARED WITH WORLD LEVELS

Bucharest REVISTA ECONOMICA in Romanian No 2, 11 Jan 80 pp 3-4, 28

Article by Dr Vasile Bogdan and Marius Costea, Institute of Industrial Economics: "General Recycling of Resources. Aims and Trends"

/Text/ Recovery and restoration to economic circulation of the resources incorporated in the goods discarded from material production and from consumption have been designated a distinct activity in our national economy as a whole. Resource recycling was organized on the basis of a series of regulatory enactments issued by the government for each particular type of resource as it became economically significant. But the quantities accumulated in the course of economic growth made it increasingly necessary to regulate recycling activity on a uniform basis.

Therefore we feel the ratification of the recent Decree of the State Council on Recovery and Exploitation of Reusable Material Resources marks the start of a new stage of resource recycling in Romania, characterized by an overall approach to the recycling problem on the level of the whole national economy both by transferring the recycled resources from the sectors generating them to those that can make adequate use of them and by organizing a real industry for reconditioning parts, subassemblies and products. It is safe to say we are witnessing a true reconsideration of the place and role of resource recycling in the Romanian economy as a whole.

Under these circumstances and in view of the progress made so far, we shall try to forecast some aims and trends that are appearing in this activity.

A Major Source of Raw Material Supply

For a long time extraction of useful substances from discarded goods was considered the main form of resource recycling, explaining why recycling made particular progress in raw material supply, especially when the cost of procurement by this route became competitive with that of extracting them from note. This is illustrated by the recycled resources' share in the raw material supply essential to production of steel, aluminum, copper and lead,

of which Romania has quite limited natural reserves and has to import constantly growing quantities. We refer mainly to these types of resources because they are incorporated in large quantities in commodities (producer goods and consumer durables) that are coming to be discarded in mass proportions. And according to the Directives of the 12th Party Congress, the investments in industry in the next five-year plan will emphasize modernization and reequipment of the existing units, which will mean discarding a greater mumber of machines and installations, and obsolescence of the consumer durables now in the homes of the public.

Nearly 6.1 million tons of scrap iron were collected in 1978. While I ton of scrap iron is considered equivalent to 2 tons of ore in useful content, recycling of this resource provides a degree of Romanian economic independence of about 42 percent compared with that of less than 9 percent provided by the domestic output of iron ore. The actual contribution of recycling is even more apparent when we consider that scrap iron conserves not only iron ore but just as much metallurgical coke, energy and labor.

As regards average consumption of scrap iron per ton of steel produced in 1975 (information on which is available in the journal LA RECUPERATION-RECYCLAGE) (1), our results were better than those of a number of countries such as the USSR, other European socialist countries (excluding Yugoslavia), France, the FRG et al. (Table 1). But they were inferior to results in the United States, Sweden, Spain, Italy etc. Of course in this comparison allowance must be made for the differences among conutries in the proportions of each type of steel production process.

In 1977 the Martin steel mills in the units of the Ministry of the Metallurgical Industry consumed an average of about 404 kg of scrap iron per ton of steel produced, those in France consumed 933 kg (2), and those in the FRG consumed 706 kg (3). In other words, even though our overall results were better than those in France and the FRG, comparison according to types of processes shows that we still have considerable reserves for exploiting greater quantities of collected scrap iron.

In domestic production of aluminum, the proportion of recycled resources in the total raw material input is much lower than in France, the FRG or the United States (Table 2), and it is a well-known fact that aluminum production based on tradition raw materials consumes a great deal of energy.

Our results in recycling copper are better than those in France but inferior to those in the FRG and the United States. Greater efforts are required in this area because the conditions for procuring copper on the world market are constantly deteriorating. In the cases of both copper and lead recycling can do far more to reduce the foreign exchange outlays on procurement of the necessary raw materials. But it must be said that in the field of nonferrous metallurgy the resources are recycled under poculiar conditions because most of the useful substances consumed are scattered over a wide variety of products causing difficulties in developing and implementing efficient methods of recovery and separation. In this case development of recycling primarily

depends upon preparation of perfected methods of separating useful substances from heterogeneous mixtures at costs comparable to those of obtaining them from other sources. The steadily dwindling useful content of the nonferrous ores from the exploited deposits increasingly justifies orientation of scientific research toward development of such methods.

Table 1. Production of Steel and Consumption of Scrap Iron in 1975

5	Tara 1	Producția Node oței - mii tone -	Consumul de fler vechi - mil tone -	Consumul media de fler vechi pe o tonà de otel produsă - ku -
	inta*)	9 549	4 661	488
U.R.S		141 329	47 957	339
Alte				
socia				
europ				
(excl		41 743	12 339	296
Frant	lavia)	21 530	7 998	371
	Germania	40 415	16 767	415
Japor		102 313	38 569	378
S.U.A		105 945	79 977	755
Sucdi		5 611	4 085	728
Irolla		21 836	15 360	621
Som	in	11 098	6 517	587
Angli		20 198	11 647	577
Canas		12 809	6 612	316

1. Country

2. Steel output (1,000's of tons)

3. Scrap iron input (1,000's of tons)

4. Average scrap iron input per ton of steel produced (kg)

5. Romania\*

USSR

Other European socialist countries (except Yugoslavia)

5. France

FRG

Japan

United States

Sweden

Italy

Spain

England

Canada

\*Figures taken from the statistical yearbooks of Romania (for steel output) and from the Central for Collecting and Processing Refractory and Metal Waste (for the quantity of scrap iron collected). For the other countries, see LA RECUPERATION-RECYCLAGE, Special Number, Paris May 1977.

Table 2. Proportions of Recycled Resources in Total Raw Material Consumption
To Produce Some Nonferrous Metals

Country	Year	Aluminum	Copper	Lead
Romania	1978	8.0	38.4	34.2
France	1976	30.0	30.0	40.0
FRG	1977	35.0	40.0	45.0
United States	1976	48.0	50.0*	50.0×

As of 1974.

New Trends in Explicitation of Recycled Economics

Regarding resource recycling solely as a reason of raw material supply is typscal of a certain developmental store of industrialization characterized by predominance of injustrial wastes and residues of industrial processes in the total materials recovered and returned to economic corollation. When the process of discarding a large volume of later neutr and communer and is in-'enalfied, this activity takes on new attributes in the way of direct particlepation in the satisfaction of social derands (for production or consumption) to a maximum degree with minimal efforts. The line - ws of the 17th furty Concress say, "Forever a greater effort will be a pecondition and reuse subassemblies and spare parts, while standar's for recovery will be set and specific tasks for ministries, motrals and enterprises will be assimed. This will make rajor savings in materials, special steels, energy and labor and expedite solution of the problem of supplying spare parts." This requirewent is formulated in accordance with the evolution of recycling both in Romanua and on the world letal, and it is based on or nonic bensiderations to the effect that major ratural and labor resources retain incorporated in any commodity after a social lemant is met. It is aminimally a matter of better exploitation of natural and labor resources in many them in two or more projuction and consumption cycles.

These decisions are based on a number of educe to the same materials and the energy input necessary to produce some materials and recycles resources is less than that required to obtain the same must be from the principal raw materials (Table 3).

Table 3. Energy Input Necessary to Post of Materials

	"sing traditional raw raterials	Using recycled resources
Steel	100	35
Alwainum	166	Ži.
Copper	10.	17
Lead	1.0	145
Magnesium	100	2
Titanium	100	Line

Therefore recovering some materials and returning them to communic circulation also helps to reduce the demands of economic growth upon the energy resources. Of course the overall effectiveness of recycling cannot be judged without also considering the labor resources incorporated in the recovered materials and the effort required to contat entry ental pollution. Basically the use of scrap iron in steel production reduces the energy input by 36 percent, but it also helps to conserve social labor and to solve some difficult pollution problems (reduction of the mant time of retal, slag and wastes deposited in the environment). The fact that Japan has become a big purchaser of used cars from the United States resently is to be explained by the many advantages of recycling (4).

plication of scientific advances and technical improvements to production is witening the gap between the lifetime of a commodity and that of the subassembles that compose it. This means that a number of components in not lose their use value when the respective commodity ions, and it explains why new sectors for recovery and marketing (with or without reconditioning) of reusable components have sprung up in the resource recycling field. For instance it is estimated that nearly 60-70 percent of the sales of the French firms that dismantle motor vehicles are made by recovering and marketing components as spare parts. Two distinct activities are emerging more and more clearly in these firms, namely dismantling to recover the reusable parts and colicating the materials resulting from dismantling in order to return them to economic circulation as raw materials.

The trends appearing in Romania and throughout the world in the resource reincling field denote the progress of a new and qualitatively superior stage.
It is a matter not only of intensified recovery of materials but also of restoring them to economic circulation on a higher level of processing and so
also of exploitation. For example the efforts to recover steels in France
are intended not only to curtail consumption of iron ore but particularly to
restore them to the production process in the technological stages permitting
maximum use of the alloys (chromium, nickel, vanadium, molybdenum etc.) in
marious types of steel, helping to remedy the shortages caused by importing
these resources.

Along with the development of resource recycling, foreign trade exchanges of recovered materials have appeared and developed in recent years, helping to balance some countries' material reserves or even their foreign payments. This is illustrated by the fact that in 1976 its exchanges with Italy alone provided France with a favorable balance of more than 1.4 billion French Iranes, when scrap iron and the nonferrous metals accounted for more than 92 percent of the value of its exports. On the other hand the figures in Table 4 show that the main export flows are from the countries with natural reserves to the ones that are poorest in this respect. Italy, Spain, Japan, the FFG and Canada were the main recipients of scrap iron exports in 1975.

The fact that a number of countries import large quantities of materials recovered in other countries clearly shows that they have adjusted their industry to the requirements of processing such resources. In other words it is a question not only of creating a recycling industry but also of adjusting the industrial sectors to the requirements of processing the recovered materials. These contries have adapted their industry to exploitation of resources that have become available in material production and in consumption, on toth the domestic and international levels. Therefore developing suitable athods of processing the recovered materials is becoming an efficient course of action for a country's participation in the world exchange of material values.

The brief presentation of the main results and trends in the field of recovery and restoration to economic circulation of worn commodities indicates that

rearral recycling of resources is to be interpreted as a concept basic to the rearrant on of a modern economy. Therefore it is to be expected that problems of improving this activity will take up more and more of the efforts of a widening circle of researchers in economics and technology.

Table 4. Imports and Exports of Scrap Iron in 1975 (in 1000's of tons)

Para 3	Import 2	Export	3 Suidly
UHBS. 5	-	1 130	+ 1 139
Problet 1	277	2 810	1 2 331
It F Commun	1.79	2 296	4 600
l and m	8 413	5	- 3 4UR
0.010	2 176	3	- 2 175
Sur dia	334	8.8	- 341
Arragina	5.0	916	4 8784
S.U.A.	277	@ 717	+ 8 440
Catt 100 1	9.29	4.20	- Joseph
Trape (i.i.a.	3 897	000	- 3 (11)

- 2. Country
- Imports
- 3. Exports
- . Balance
- : USSR France F//G

5. Italy
Spain
Sweden
England
United States
Canada
Japan

#### FOOTNOTES

- 1. LA GESIPERATION-RECYCLAGE, Special No, Paris, May 1977.
- ?. Idem.
- 3. ROHSTOFF RUNDSCHAU, No 5, 1979.
- LA RECUPERATION-RECYCLAGE, No 4, 1979.

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## MACHINEBUILDING MINISTER DISCUSSES GOALS, SHORTCOMINGS

Bucharest SCINTEIA in Romanian 8 Jan 80 pp 1,3

/Interview with Ioan Avram, minister of the machinebuilding industry, by Corneliu Carlan; date and place not given]

Text /  $\sqrt{Q^7}$  Comrade minister, would you please present several of the main achievements in machinebuilding in the period which has passed in this 5-year plan?

have reported fulfilling the plan for 4 years of the 5-year plan one and one-half months ahead of schedule, with the growth in production being obtained predominantly due to the growth in labor productivity under conditions of an annual development rate of around 13 percent. Machine tools valued at more than 1.5 billion lei, fine mechanics products of 1 billion lei, 69 drilling installations for crude oil and gas, 13,000 tractors, means of electronic automation and other products have been produced to exceed forecasts.

The branch is deeply involved in the technical supply of the national economy. We are closing this five-year plan with a technical potential adapted to the modern technological trends. Through the concern of the party and the secretary general, Comrade Nicolae Ceausescu, a powerful production base has been developed of complex technological equipment for performance and of heavy machinetools with the construction of the heavy equipment combines in Bucharest, Iasi, Craiova, Timisoara and Cluj-Napoca, as well as some capacities for automation and industrial electronics equipment.

At the same time, we have assured the modernization of production, which today is being achieved in the proportion of 90 percent of our own concept, under conditions of a degree of utilization of metal which is 25 percent higher than in 1975. Actually, the machinebuilding industry is found in all the country's counties, participating actively in the proportion of more than 75 percent in the technical supply for investment projects. Actually, this year we are producing the entire machinebuilding production of Romania in 1938 in just two days.

Try has fulfilled the 4-year plan of the 5-year plan nearly one and one-salf months early. Yet, against the background of these positive results as a whole, the machine builders owe the national economy a number of products for 197, particularly technological equipment, which were not many factured in the quantity forecast. How do you explain these lass and, in particular, what are you loing to prevent similar shortcomings this year?

A Last year, the machine builders produced a 24-percent greater volume at technological equipment than the preceding year, but this figure only expresses the quantitative growth of this production in tens, and the comple is we and superior technical nature of the manufacture is particularly (montant, reflected by the value of the technological equipment manufactured, which is " per ent greater than last year. Despite this, some lags were recorded and they created short omings for our beneficiaries in fulfilling certain invostment projects. To a great extent the causes for these lags belong to us and are found again in the shortcomings in the internal organization of manulacture, in this regard, we can mention the insufficient lead of technological preparation ever the start into manufacture, some narrow spots on certain teusinginal lines, the defective operation of interplant cooperation, not have ing prompt assurance of materials from the country and imported materials. All these defects have been demonstrated under conditions in which we have had th assimilate a great diversity of equipment for the processing of rubber, plastics, synthetic fibers and threads, hydrocarbons, intended o contribute to raising the degree of processing and to superior utilization of some raw materials and materials. But just as important have been the defects in the rallaboration with units in other ministries. For example, a number of benefifiaries provided us the documents for executing the equipment with delay, which to a great extent disrupted the programs for preparaing manufacture and Int material-technical supply. Also, independent of this, a number of suppliers in metallurgy and chemistry did not respect their contractual obligations promptly and completely with regard to delivering certain varieties and sizes of metal, materials and parts. The causes I have referred to also are found in the situation of other products remaining, such as train cars. meter vehicles, electric meters and so forth. This year, compared with 1979, we have achieved a large growth in the production of technological equipment -by around 170,000 tons. Also we are to manufacture more than double the mining equipment, 36 percent more products and fine mechanics and undraulic action. 28 percent more industrial electronics and 47 percent more machine racls.

In order to create the production conditions necessary, the measure has been taken so that, alongside the specialized units, other machinebuilding units are drawn into the manufacture of technological equipment. At the same time, through the plan we have the material base of production assured and we are taking action with our suppliers of materials and, in particular, metal for strict respect for the distributions and contracts. Until now we have received execution documents for technological equipment in the proportion of more than 90 percent. The great majority of machinebuilding units have known the plan tasks on time, which has given them the opportunity to organize their manufacture in the production sections and program it rationally.

Thus, we are convinced that a number of shortcomings from past years will be avoided in 1950, also counting on a more productive cooperation with the suppliers and beneficiaries.

ministries of metallurgical industry and of the chemical industry, they appealed to themsenine builders to provide immediate delivery of the products last from last year, particularly technological equipment. Specifically, how will these be recouped?

On the bisis of analyses made with our main beneficiaries in the chemical and metallurgical industries, we have reprogramed the priority delivery of all back technological equipment in accordance with the status of work on the construction sites, particularly for the projects whose schedules for being put into operation have passed. Also, a special system has been established for effectively following up on the supplies with materials and subassemilies from cooperation for each equipment at all stages of manufacture up to delivery to the beneficiaries, correlated with the forecasts of the assembly imetables.

In some machinebuilding units, either a stagnation or a reduction in the indicator of utilization of machinery and equipment was recorded last year. What are the reasons for this situation and what measures are being taken in true to assure better utilization of production capacities this year?

A / In 1979 for the machinebuilding units as a whole, an indicator of utilization of available working time of the machine tools of 84.6 percent was obtained -- below the planned level. This to a large extent is due to having new capacities enter into production or to the development of some existing ones which were in a period of achieving the parameters planned, including the indirectors of utilization. But it is no less true that some enterprises and industrial centrals did not prove to be concerned enough with the complete utilization of production capacities during 1979. In particular, shortcomings ore seen in recruiting and training the labor force in the warm and processing sectors. Also, some enterprises still are maintaining an inappropriate relationship between the assembly and processing manual labor. In order to elimimake such defects this year, technical and organizational measures are being taken in the units which mainly seek to recruit and train the labor force for the scarce trades, judicious programing of equipment loads, assuring the advaces between sectors and the steady supply of places of work, extending the polyservicing of machine tools, mechanization of projects with a large volume of work and automation of production processes.

Many times SCIENTEIA has pointed to a number of shortcomings existing in the area of interplant cooperation. Surprisingly, the machinebuilding enterprises in the same central or from the same county mutually cause difficulties through failure to respect contracts. Is it a question of defects contracted with the planning and preparation of production or arganization of activity in the particular units?

A / The existence of some shortcomings in the area of interplant cooperatin, many of them uncovered by SCINTEIA, is a real fact. As a result of the rapid growth in this branch's production and the diversification and increase in the complexity of manufacturing, certain lacks of correlation have appeared between some sectors so that the lack of capacities has been found in the manufacture of motors, pumps, compressors, reducers, hydraulic and pneumatic equipment and some categories of soldered parts and heavy mulds. Of course, measures were taken in preceding years to eliminate the differences through the broader development of the sectors I have referred in, but the anticipated effects were not obtained in their entirety due to the delay in placing some production capacities into operation. We are taking decisive action to implement the investment programs in this area so that large capacities of heavy forged parts, hydraulic equipment, pumps, electric motors and others will enter into operation in 1980. As a negative aspect I should also mention the subjective practice of some enterprises which supply parts within the cooperation program, which give priority to preparing and producing their own basic products to the detriment of the obligations to cooperate for other units. We are striving to more firmly place into action those levers which stimulate the enterprises' interest to fulfill all their contractual obligations, including the ones for a cooperation program, by strengthening discipline in this area within the current economic-financial mechanism, which is placing the emphasis on net production and other indicators of economic efficiency.

1 Q / In 1980 the machine builders will have special tasks in the area of reducing material consumption. Please give us these tasks as well as the more special measures taken by the ministry's leadership to fulfill them.

A As in the entire economy, machine builders must cope with some particularly mobilizing tasks this year in the area of increasing production efficiency. Thus, net production must be 16 percent greater than the level planned in the preceding year, while profits must be 10.6 percent greater. In order to fulfill these tasks, together with increasing physical production, we must assure the reduction in production expenses of 29 lei per 1,000 lei goods production, of which material expenses must be reduced 18 lei. An important way will be the superior utilization of materials, particularly metal, which this year will have an indicator of utilization which is 13 percenthisher than last year. A number of measures have been taken for the strict fulfillment of these tasks in all the production units. Thus, if I refer to saring on metal, we currently are applying measures mainly aimed both at reducing the net weight of products through construction replanning as well as at reducing technological consumption through the broad introduction of modern technologies in the warm sectors with small processing additions, such as precision casting and forging, cold extrusion and so forth and through rationalization of cutting parts from rolled steel. In order to illustrate the importance of these actions I should point out that eliminating the machining allowance by cutting in most cases costs more than even the initial value of the metal eliminated. In this action we are giving a decisive role to the powerful design and research potential of our institutes and centers within each industrial central and the technical force in our units whose activity should be based in particular on concept work.

At the same time, we are concerned with more rational management of the metal, understanding by this the extending of utilization of coupons and ends or other materials resulting from the technological process in producing small parts, use as such or following reconditioning of parts resulting from the repairs and from cancellation of some equipment, reducing the percentage of waste along the technological course of metal processing. What will the efficiency of these measures be? Some examples are graphic: In order to manufacture a self-propelled combine C12, we will consume 251 kg less metal, for a 2,000-mm cutter--3,600 kg less, for a type of freight car--1,026 kg less and for a passenger car--371 kg less.

Q / But what measures do you have in mind for this year with regard to energy consumption? I have formulated this question proceeding from the fact that last year themachine builders exceeded the planned electric energy consumption.

A 7 Fiven the particular importance of the problem of the substantial savings on energy resources, on the basis of the provisions of the Council of State decree of last fall, although we are not an industrial branch with big energy consumption, we have taken measures for the strict rationalization of electric energy and fuel consumption. Among them I should mention the continuation of the action to modernize and replace the inappropriate industrial orders, the application of techniques with minimal energy consumption and solding the idle running of equipment. We are giving special importance to the utilization of secondary energy resources through the supply with recuperators for continuously-operating ovens or through utilization of remanent heat of the cast and forged parts. For example, the total quantity of secondary energy resources which will be utilized this year equals the saving of 1.0,000 tons of conventional fuel. Also, all the measures we are proposing in the energy area will this year assure the saving of 240,000 kWh of electric energy and 135,000 tons of conventional fuel.

What new qualitative elements are appearing in 1980 in the modernization or production of the machinebuilding subbranches?

In accordance with the decisions of the 12th party congress and the tises and indications given by Comrade Nicolae Ceausescu, the party's secretary general, we are taking action for the more emphasized development and modernization of the machinebuilding industry. Our branch is directly involved in implementing the economy's investment program and in the broad-encompassing action aimed at assuring full energy independence in the next decade. In this record, we note the priority prowth this year in the production of mining and energy equipment. In this area, the programs seek production of combined storiae and driving machines, mechanize proposing complexes, forging installations for mines afts with 5-6-meter diameters, new equipment for petroleum and marine drilling, a range of energy boilers on lignite and bituminous shale, turbo-appregates and microhydroaggregates. With a view to reducing energy consumption in the economy, we are giving special attention to improving the energy output of all the machinery and equipment we are manufacturing. Large increases are

rded for some performance products, such as trucks, tractors 10-ton tip-trucks, as well as specialized ships. Another imnor-fientation is that of the emphasized development of consumer goods action, a sector in which we are proposing to do much more in order to another in an action and increase car production and the production of household and and the products which the population requests. The modernization is attracture of machine building is also reflected by the rapid evolution process computers, automated systems for high-nower action and improved components. Under the initiative and direct guidance of Comrade in capacities for aviation, a Romanian industry with a tradition and large implications for the progress of the entire economy.

the collectives of workers and technical cadres are determined to all firmness, demonstrating creative initiative for exemplary fullment of the plan provisions and commitments and for steadfast implementation the 12th party congress decisions.

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#### USE OF BUDGET TO INPROVE ENTERPRISE EFFICIENCY DISCUSSED

Bucharest REVISTA ECONOMICA in Romanian No 3, 18 Jan 80 pp 9-10

Discussion recorded by Maria Ionita: "The Income and Expense Budget, an Instrument for Efficient Management of Economic Activity"

Text Participants in the discussion: Dr Vasile
Lantos, chairman of the Mures Territorial Pinancial and
Banking Commission; Dr Ioan Otelea, director of the Mures
County Branch of the Mational Bank; Balinth Csaba, chief
accountant at the Reghin Enterprise for Equipment and
Spare Parts; Petre Hentes, chief accountant at
"Metalotehnica" in Tirgu Mures; Andrei Cosos, chief accountant at the Tirgu Mures Chemical Fertilizer Combine;
and Gheorghe Popescu, chief accountant at "Im Tex in Tirgu
Mures"

Nearly 2 years have passed since the plenum of the RCP Central Committee in March 1978, which approved a complex of measures for improving the economic and financial mechanism—a period in which special efforts to strengthen the economic and financial self-management in enterprises, to increase the powers of the collective leadership bodies in decisionmaking and to expand the role of the enterprises and centrals in planning their own activity have been made and are continuing to be made.

With a view to knowledge of the mode of operation of the economic and financial mechanism at an enterprise level, the editorial staff organized, with the help of the Mures Territorial Financial and Banking Commission and the Mures County Branch of the Mational Bank, a discussion, the synthesis of which we publish below.

The Viability of the New Economic Indicators, the Positive Role of the Income and Expense Budget

Last year, the income and expense budgets were used by the collective leaderships in enterprises as instruments for planning and, especially, as instruments for analysis of financial execution and financial equilibrium, analyses that were useful for taking the steps needed in the fields in which there appeared delays in fulfilling the economic and financial indicators or deviations from financial and plan discipline. One example is graphic: the Chemical Fertiliser Combine in Tirgu Mures registered at the end of the first quarter of 1979 an excess of about 15 million lei in the planned production costs. The analyses made with the help of the income and expense budget for each section, and the measures established within the framework of these analyses, provided for the complete recovery of the excesses in the next 2 months and the staying within the planned level of production costs. Efficient use of the income and expense budgets has led to the expansion of the role of the financial factors in better managing the funds, in mobilizing the reserves for faster growth in efficiency, and an exercising strict control over the way in which the resources of the economic units are used.

I conomic practice shows that where things have been followed closely and decisive action has been taken, the results obtained have rewarded the efforts, they also being of a nature to inspire reflection by the leaderships of those enterprises that are still put in the situation of justifying the Tailure to stay within the consumption quotas and the planned level of production costs. The results obtained last year by many enterprises in the county are such improved in comparison with those in preceding years, which demonstrates the viability of the new economic and financial indicators, the positive role of the income and expense budget in making economic analyear at an enterprise level. We mention in this regard the fact that many saterprises in the county have good solvency, with the tieups of funds being insignificant, have fulfilled the majority of their indicators, do and have unsold products, have respected their sale contracts for the majority of the products, have achieved their accumulations, and so on. The results achieved at the level of the county could have been better if some shortcomings had not also appeared in the activity of some enterprises, especially with regard to the regularity of production, of the deliveries and the collection of the equivalent value of the products, and some products without sale ensured had not been put into production and achieved, aspects that also negatively influenced the financial results of the respective economic units.

In some cases, there have appeared certain shortcomings regarding the preparation of the income and expense budget, of which we mention: an unsuitable dimensioning of the funds, the failure to completely fulfill the provisions both for sources and for some expenses, and a lack of correlations with the other plan sections, a fact due in a great degree to the lack of mastery of the new regulations on the economic and financial mechanism by all the responsible factors. In addition, the control bodies have found that some provisions in budgets have not been brought into conformity with the changes made in the economic plan and have not been correlated with the other plan sections; all the income, especially that from "other activities," had not been included in some budgets; some indicators in budgets are not divided up according to factories, sections and shops; some enterprises have exceeded the planned level of production costs; and so on.

The unsuitable economic and financial results at some units with a percentage in the county's economy are also explained by means of a number of changes in the main plan indicators, phenomena that have had direct negative consequences regarding solvency and the formation of accumulations. In the opinion of the specialists in the units, the change in the plan indicators was made by the coordinating bodies, in some cases, at the end of the periods, without there having arisen within the respective units elements that justify this. Under these conditions, it is necessary for both the collective leaderships of the economic units and their coordinating bodies to take all the steps, as early as the planning phase, so as to ensure the stability of the plan throughout its execution, and, when plan changes have nevertheless occurred, to also ensure the necessary correlation of all the plan sections, so as to prevent the lack of correlations and all the implications that result from it for the financial situation of the economic units.

The Active Role of the Loan and the Speedup of the Payments

The application of the principle of economic and financial self-management of the enterprises is leading to the meeting of their need for funds from their own resources to a greater extent. Nevertheless, a part of the enterprises' need for funds required for the process of production and development will be met further from loans.

Bank has conceived a new loan-planning methodology, by means of which, in contrast with the past, all categories and necessities of loans are determined and all one's own and attracted funds, including the part of profits earmarked for increasing one's own funds, are mobilized. According to this methodology, devised for applying the new economic mechanism, the loan's participation in the formation of circulating funds has acquired a new, more active, qualitatively higher content, by means of which the necessities of loans are dimensioned better and more correctly, at the same time causing the enterprises to contribute to the self-financing of production and to improve their solvency.

In the field of providing a loan for investments, however, there arise some problems that we submit for analysis to the central banking bodies in order for methodological solutions to be adopted, so that the solvency of the economic units is not affected.

A primary aspect that must be mentioned is that regarding spare parts (the initial equipping), which are no longer allowed to be purchased out of investment funds, they having to be purchased out of production funds. Such a procedure has negative effects on the unit's solvency, since the quota of circulating funds for the respective parts is obtained only after the commissioning of the respective productive capacity. The parts in question—imported or domestic—always come along with the equipment and not upon commissioning or afterward. Installation materials, which the construction unit does not have provided in the supply plan—that is, which have not

osen communicated to the builder upon preparation of the supply plan—are also in the same situation. Such situations appear frequently and inevitably, since the designs are delivered in stages, and the specifications of materials cannot be communicated to the builder in such a way that it can provide them in the supply plan.

The specialists present at the discussion also discerned the fact that at present some unwieldly regulations still exist in such fields as those reserving the planning of, utilisation of and payments from the fund for scinific research, technological development, and introduction of technical progress. We are referring to the circulation of the payment documents through a separate account from the enterprise to the central. In fact, the payments should be made by means of a simple accounting entry at the enterprise—of course, within the limit of the provisions in the income and thense budget.

in order to improve the bank-enterprise-central relationship, the specialinto have formulated a number of suggestions regarding the use of the loan and the speedup of the payments.

Account B (representing expenses that are borne directly from Account B to the task are perfectly from the financial results, specified in Appendix 1 to Law No 29/1978, are paid from Account B. Due to this fact, very many payment oppositions in addition to those done previously have appeared at the bank, since, besides the remuneration for training the personnel, the CAS State Insurance Society, installments, withholding and so on are paid from this appoint. It is estimated that at least seven to eight operations are performed each month for each unit, which, at the level of the county, represents thousands of operations during a year. For simplifying the operations at the bank, it has been proposed that the sums that are now paid from Account B (representing expenses that are borne directly from profits) be transferred from Account B to the current account, from which all payments would then be made.

tion and so on are released by the bank as a part of the pay fund calculatin relation to the degree of fulfillment of the plan for the value of
net output accumulated from the start of the year. For the last month of
the period, the volume of net output achieved is determined by means of estimates, it being based on the gross output achieved, to which the planned
percentage of material expenditures is applied. However, not all units
apply a uniform methodology in the estimated determination of the achievements. Some enterprises apply to the gross output reported by means of the
INDAC [expansion unknown] (it is prepared on the 2d of the current month
for the expired month) the planned percentage of material expenditures,
without determining the gross output for the calculation of net output.
Other units utilize commodity output for the calculation of net output. In
mot one of the cases is there taken into account the increase or the decrease in the stocks of semiproducts or in unfinished production, there

resulting substantial differences that at a given time can favor or assauvantage the enterprises in the determination of the level of the pay fund calculated.

Cases have been found in which, for this reason, the defferences between the net output actually achieved and that estimated have amounted to 5-6 million lei, with the estimated net output being higher. Thus, the pay fund calculated on a basis of estimated data has been thousands of lei higher than that required. In order to avoid these shortcomings, it has been proposed that the pay fund required be released as a part of the find planned for the respective quarter. In the case in which the rights required for the last month of the quarter, together with the rights collected in the first 2 months, are higher than the pay fund planned quarterly, the sum by which they are higher would affect the fund planned for the next quarter, and the calculation of the pay fund would be done on the basis of the final quarterly data, with the possible excesses having to be resolved in accordance with the provisions of Decree No 199/1978 and Decree No 148/1979.

By means of this, the month-by-month changing of the labor and pay indicators and of the plan for the value of net output would be availed and all the bodies (local, hierarchical and higher) would be inclived in resolving the situation that the enterprise has reached. During the situation that the enterprise has reached. During the situation that the possibility of intervening with regard to the steady achievement of net output by the enterprise, the revision of the labor and pay plans in accordance with the substantiation provided by the enterprise, and so on. Monthly, it would be a good thing to keep track of the compliance with the planned number and the achievement of the planned labor productivity in the case of the exceeding of the planned number.

The management of economic and financial activity on the basis of the income and expense budget requires the institution of an organized system of effective supervision of the manner of fulfillment of the budgetery provisions. We feel that it is not enough for this supervision to be done monthly, quarterly or annually. A collective leadership body cannot be content with so little. It must take steps to know the "budgetary execution" at smaller intervals, some even daily, because only in this way is it possible to intervene in time to influence the fulfillment of the provisions in the income and expense budget.

Daily supervision of the "Incomes" column is possible even according to their composition in the budget. This supervision is possible without any sort of difficulty, even under the conditions of unmechanized accounting. It is harder to keep track of the expenses and results of the enterprise, but they too, on the basis of sensibly prepared estimates, can be known at even smaller intervals and can be useful without any reservations for the decisionmaking process of the enterprise.

The income and expense budget has an important role in the management of economic and financial activity. In order for this role to be affirmed in

practice, the analyses and their results must not be only a prerogative of the financial and accounting section. They must be known by the collective leadership bodies, by all the decisionmakers and executives.

The income and expense budget can become an instrument for effective management only when each section of the enterprise knows the tasks that devolve upon it. In these situations, the leaderships of the sections can establish the measures for fulfilling or staying within the provisions of the budget. Thus far, this has not been understood to a sufficient degree and statements like the following have been made: "It is impossible to prepare an income and expense budget for a section, shop or department." In reality, each section must know for the commodity output the level of the total and material expenditures, the value of the commodity output at the delivery price, and the profit that it must obtain. Even some departments or offices must know a number of tasks: the supply department must know the quota of circulating funds approved for the supply field, the level of the transportation and supply costs, and the value of the materials that must be supplied; the sales department must know the volume of sales, the quota of circulating funds for the products in stock, and so on.

The achievement of high economic efficiency presupposes that each collective leadership body will adopt such measures as to ensure the consistent application of the principles of self-management and self-financing, achieve better management of material and monetary resources, prevent and eliminate the above-mentioned negative aspects and apply a strict policy of economy, utilizing for this purpose the income and expense budget as an instrument for analysis and control, for efficient management of the entire economic and financial activity.

PROFIT FUNCTION IN AGRICULTURAL PRODUCTION COOPERATIVES

Bucharest REVISTA ECONOMICA in Romanian No 2, 11 Jan 80 pp 8-9

/Article by Ion Manea of the Stefan Gheorghiu Academy/

Text The decision adopted by the RCP Central Committee Political Executive Committee at its 25 December 1979 meeting regarding the application of the provisions of the Law on Profit in the Agricultural Production Cooperatives, beginning I January 1980, is an economic measure of the greatest importance for placing all the activity in these units on economic principles. Following the 1978 generalization of calculating production costs in the agricultural cooperatives, it has been among the economic and organizational improvements established by the party and state leadership regarding achieving a unified system of record-keeping and management in the agricultural units with a view to the unified leadership of agriculture. Among these measures, there has been particular importance in the creation of the single state and cooperative agroindustrial councils, a basic organizational condition for bringing the two main sectors in agriculture—state and cooperative—closer together and for raising the general level of agriculture.

in the report to the 12th party congress, party Secretary General Comrade Nicolae Ceausescu stressed the obligation belonging to the united councils of assuring "efficient use of the land fund, of material and financial resources and of the labor force and the economic strengthening of each component unit."

Introducing the indicator of profit in the agricultural production unit will contribute to implementing in cooperative agriculture the imperative formulated at the congress--firm application of the new economic-financial mechanism, the principles of self-leadership and self-management and the workers' participation in the profits in all sectors.

## Establishing Profit

In the agricultural cooperatives, as well, profit is a financial result of an activity which results in the production of goods. Profit is established in the process of creating net income, being a component part of it: The form

cooperative ownership means that the profit in the agricultural cooperatives is also known as the Lat income of the agricultural production cooperative in the sense that it is created and utilized in a certain agricultural cooperative by certain participants—owners, producers and beneficiants—in the production process. In this way, the profit in the agricultural cooperatives characterizes the efficiency of the cooperatives activity and the spirit of responsibility with which the public wealth and the credits accorded by the state are managed. (In the agricultural cooperatives the net income does not have a content identical with that of the state agricultural enterprises, a fact explained by the differences maintained between the two forms of ownership. We see some of the differences below.)

## Components of Net Income

State Agricultural Enterprise

Agricultural Production Connerative

Tax on circulation of goods
Tax on production assets
Commercial supplement (rebate)
Interest

Profit
Taxes
Surcharges
Insurance premium
Net income taken by the state
through prices
Interest

determination of profit in the agricultural cooperatives results from subtracting from the total incomes the expenses for live and past labor, other laws, contributions and premiums. It is very important for the collective determination of profit (or loss) for each product and for each production subunit to the effective exercising of their duties and responsibilities.

Achieving profit in the agricultural cooperatives and continually raising the level of it are the result of the efficient economic activity and good management of material and monetary resources. Profit is an important economic rategory at the base of drawing up the budget of incomes and expenses. An exact knowledge of the efficiency with which each product separately is probled guides the collective leadership organs in adopting appropriate decisions to achieve profits and raise their volume. In this way economic-financial self-management is strengthened not only at the level of the agricultural experative but also at the level of the production subunits and the work formations and places. A real participation is achieved to the extent to which each cooperative member knows the efficiency of the work done, both in the production process as well as in the leadership process.

As an important element of the newly created value in the agricultural coonerative, profit is one of the basic component elements of net production (see the list/below). Since the method by which net production is calculated in the agricultural units affects its size, it is possible for some influences to appear also with regard to the size of profit as a component element of net production. Some explanations are needed to bring out this aspect, explanations connected with a correct determination of net production. Component Elements of Net Production (In accordance with Law 29/22 December 1978)

- 1. Payment for work.
- 2. Contributions to the pension and social security fund
- 3. Tax on land
- 4. Tax on the salary fund
- 5. Tax on incomes from industrial activities
- 6. Insurance premiums
- 7. Aid fund
- 8. Expenses for cadre training
- 9. Monetary contribution to carry out projects of public interest
- 10. Previous years' losses which are nonimputable and not covered
- 11. Other expenses provided by law
- 12. PROFIT
- 13. Contribution for state social security belonging to personnel employed on the basis of a work contract
- 14. Compensation for transfers and assignments
- 15. Assignments in the interest of the job (transportation, accommodations, meals)
- 16. Tax on buildings
- 17. Interest for bank loans, current and special
- 18. Premiums for saving on materials, fodder, fuels
- 19. Technical and accounting expertise
- 10. Traffic-parking surcharges
- 1). Value of manual labor proper for pupils, students and the military for agricultural work done in the agricultural cooperative units which are transfered to the particular institutions
- 22. Other expenses like the above

Some differences may appear between the level of structure of net production calculated on the basis of the production method (indirect) and the distribution one (direct). Mainly this is due to the fact that, in the case of the first method—of production or indirect—calculating elements known in the units, real ones are taken into consideration, ones which are planned and sought statistically and by accounting as elements of total production and of material expenses. Net production in the agricultural cooperative determined by this method includes elements (of total production and material expenses) at the moment when they were created (carried out), which means that net production calculated in this way reflects the moment that the production is obtained.

Net production determined by the second method-of distribution or direct-is established from final component elements recorded at the moment that production is achieved (delivery and receipt of its countervalue). Since an interval of time objectively exists between these two moments, the possibility
of some differences appearing is created, however, only in the level and structure of net production.

of the two methods—although in planning, accounting, statistical records of net agricultural production and in planning the production (indirect) method is used—the branch method, of distribution (direct) is recommended. Current

utilization of the production method is explained by the fact that it has heen demanded and also because it operates with calculation elements which are planned and sought through the current record-keeping system. So, by knowing the components of total production and the elements of material expenses at the moment they are made, one may determine net production during the year, as well (and not only following closing of the unit's balance as in the case of using the distribution method).

Establishing profit in the period when the plan proposals are being worked out as well as the plan for agricultural production in a cooperative and plan implemention must be based on production of goods and must be correlated with the level of this indicator. Increase in goods production, due to the quantities of agricultural products delivered and improvement in their quality is the main source for increasing profit. (In the agricultural cooperatives which are not associated with other state or cooperative units, the goods production achieved in the cooperative is the single source for obtaining profit. From here the result is that plan achievement also must be provided for among the first planning measures as well as that for raising the share of goods production in total agricultural production.

This aspect—of raising the share of the goods production in total agricultural production, is particularly important for the cooperatives since, sometimes, the idea is put forth—that, due to the form of ownership, profit in the agricultural production cooperative may be larger or smaller than that obtained from the delivery of goods production (those who support this idea maintain that profit is achieved or exists in the naturally material form and in the phases of the production process—in unfinished production, in production decasilted in the cooperative without being delivered and so forth).

The result is that in the agricultural cooperatives, as well as the other economic units, the achieving of the planned volume of profits involves the fulfillment of the following conditions:

Fulfillment of the production tasks at the plan's level, for physical production, by total and by product;

Fulfillment of the delivery tasks established by contracts by the total and by product;

Obtaining and delivering production at the quality provided in the plan in order to obtain the planned prices.

Depending on how these conditions are fulfilled, overfulfilled or not fulfilled, the level of profit in an agricultural cooperative is established and the economic consequences with regard to profitability, efficiency of utilization of assets and so forth may be determined.

Paths for Growth

Profit in the agricultural cooperatives may grow by following both the toint paths for its growth in all the economic units as well as by using specific paths and levers.

One of these ways, already mentioned, is to raise the share of goods production in agricultural production. The existing reserves in this viewpoint in the agricultural cooperatives in most units are large and very large. In some cooperatives the share of goods production in total agricultural production is merely around 50 percent while it reaches more than 85 percent in other cooperatives.

Raising the share of goods production in total agricultural production leads to raising profit under the conditions where goods production is achieved for profitable products. In the cooperatives where zootechnics is a well-developed activity, a higher share of goods production is recorded in total production. But, in these cooperatives as well as in others where animals are raised, there is a priority demand for profitability for all the zootechnical products and for raising profitability in this branch in order to increase the share of total animal production in total agricultural production and to raise the share of goods production in total production and, directly, in order to achieve as high profits as possible.

Increasing profit in the agricultural cooperatives may also be achieved by extending payment in money and restricting payment in kind, under conditions where the cooperative members and other workers in cooperative agriculture could be able to assure the need for agricultural products (grain, wheat and so forth) by buying them from socialist trade or directly from the cooperatives where they carry out their activity (as is the procedure for some products). Basically, the means for obtaining and increasing profits in the agricultural cooperatives aims at raising the share of goods production in total agricultural production.

The determination of profit in the agricultural cooperatives involves changes in the structure of total production and goods production with regard to increasing the share of the branches and activities which bring profits, under given natural conditions and prices practiced presently for agricultural products.

Strengthening the role of economic contracts and assuring the sale of agricultural production in this system also contributes to raising profit. The contract prices are more advantageous compared with the acquisition ones and they stimulate the production of agricultural products with higher value of usage to a greater extent. Firm economic contracts and respect for them can contribute to avoiding losses of agricultural products, particularly products which are very perishable: vegetables, grapes, milk and so forth. A more clear specification of responsibilities through the contract (both in the case of failure of contracted production as well as delays in takeover or delayed utilization) can contribute to achieving large profits. Introduction of profit in the agricultural cooperative as a basic economic indicator requires a reconsideration of the entire production activity and utilization of agricultural products with regard to broadening the role of economic contracts.

Rationalization of any type of consumption and continual reduction in material costs are an important lever for increasing net production and profit in the

ignicultural cooperatives. Strict recordkeeping of consumption and rationalization of it according to economic criteria aid the effort made in the direction of profitability and raising the efficiency of agricultural production. This measure, associated with the task drawn at the recent meeting of the Political Executive Committee along the line of obtaining greater and greater production can assure profitability of all the agricultural production cooperatives in a short period.

Improvement in the quality of products obtained in the agricultural cooperatives and selection of periods for utilizing them where the producer is provided a direct incentive through price are to be the basic component of the programs which will be established along the line of improving economic activity and increasing profit in the agricultural production cooperatives. The programs which will be established will include raising agricultural production, using the land with more efficiency, extending the mechanization of jobs, using the labor force sensibly and diversifying the industrial activity and agricultures provided and cooperation with the state and cooperative units, with all these being ways for the profitability and growth in the economic efficiency of agricultural production.

## Distribution of Profit

Finning and determining the size of profit in the agricultural production cooperatives are achieved through the budgets of incomes and expenses. By its entire nature, profit answers the demands for self-leadership and self-management in the agricultural cooperatives.

The make assets which are to be established in the agricultural cooperative from profits, according to legal provisions, are the following:

Assets for economic development (at least 70 percent);
Assets of circulating resources (up to 10 percent);
Social-cultural and sports assets (up to 1 percent);
Reserve assets for production and salaries for work (up to 2 percent);
Intercooperative assets for mutual aid and consolidation (up to 2 percent);
Assets for participation in profits by the cooperative members and other workers who have worked in the cooperative;

The last two assets together should not exceed 15 percent of total profits.

By listing the assets which are to be established from the profits we have the important role which is to be played in achieving self-leadership and self-management and in the material incentives for the cooperative members to achieve the largest profits possible.

It was specified at the recent meeting of the Political Executive Committee that the introduction of the profit indicator creates the need for the agricultural cooperative units conceive of and organize their activity so that it covers the ex enses from incomes and should obtain profits with a view to assuring the resources needed for their own development and, at the same time,

contributing to establishing centralized state assets. In this way, all the assets of the agricultural cooperative are to be established from the profit, which are included in the budget of incomes and expenses as well as participation in established centralized state assets. Achieving the planned profit and exceeding or failing to achieve it have consequences—positive or negative ones—increasing or reducing their own assets or those established at the level of society, which corresponds (or does not correspond( to the demands for strengthening self—leadership, self—management and self—tinancing in each agricultural cooperative. In the case where the planned profit is not achieved, bank credits are requested and approved (sometimes not initially included in the plan) which, due to interest, reduces the cooperative's profit in the coming year (years).

With a view to implementing all its functions, profit in the agricultural production cooperative should increase together with raising agricultural production so that in a short time the profitability of all the agricultural production cooperatives is assured.

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## AGRICULTURE'S CONTRIBUTION TO ECONOMIC TRANSFORMATION SERN

Bucharest REVISTA ECONOMICA in Romanian No 3, 18 Jan 80 pp 11-12

Article by Prof Dr O. Parpala, Univ Lect B. Parpala and Univ Lect D. Redes: "Agriculture's Contribution to Romania's Transformation Into a Country With an Average Level of Economic Development"

Text As is mentioned in the documents discussed and approved by the 12th RCP Congress, the next five-year plan (1981-1985) will give rise to profound changes in the whole economic and social life of the country, which will have as a corollary Romania's passage from the ranks of the developing countries to those of the countries with an average level of economic development.

World practice (as well as our own experience) shows that contemporary agriculture plays a leading role in the economic modernisation of any country. A traditional sector, but far from being conservative, resistant to scientific and technical progress, agriculture proves to be an extremely dynamic sector, suited to the application of the latest gains of the contemporary scientific and technical revolution. Agriculture has the advantage that, especially through the biological revolution, it is subordinating more and more to itself the forces of nature, which it utilizes for man's benefit, for his progress and prosperity. As a matter of fact, the agricultural revolution, accomplished thus far in a number of developed countries, has caused a faster rise not only in the technical equipping of labor but also in the productivity of agricultural labor than in industry. As a result, in several countries of the contemporary world, the level of productivity of agricultural labor has exceeded that of industrial labor. with the much discussed problem of parity in productivity already belonging to the past. Not by chance, the biggest economic powers of the contemporary world also have a strong and modern agriculture, a condition without which the attainment of their present degree of general economic development would not have been possible.

In this context, let us see what agriculture's contribution is to the growth of the per capita national income in Romania, what its role will be in the future and, especially, by what ways and with what reserves

agriculture can contribute to Romania's transformation into a country with an average level of development.

Regarded since 1965 as a basic branch of the national economy and considered a chief economic priority in the next five-year period, found at the height of the process of modernization in a country in which it has old traditions, agriculture, despite the ever decreasing percentage in national income (just 15.5 percent in 1978), has made and is making a significant contribution to the economic growth of socialist Romania. It is enough for us to mention that the national income created in agriculture in 1978 cas over 2.7 times higher than in 1950.

The first and, it would seem, most accessible way to increase agriculture's contribution to the growth of per capita national income is the raising of agricultural gross output: this as a result of speeding up the process of intensive, modern development of agriculture, there being provided a faster rise in the productivity of labor by raising its degree of technical equipping, against the general background of the transformation of agricultural labor into a variant of industrial labor.

An increase of agricultural gross output by 24.5-27.5 percent (as an annual average for the five-year period), even under the conditions in which the percentage of material expenditures would remain unchanged, will lead to an increase in the national income produced in agriculture to the same degree. The correlation of this increase in the national income produced in agriculture with the increase in population shows that, by this means, the respective per capita income will rise at least 20 percent.

However, the fulfillment of this desire presupposes the intensive growth of labor productivity in agriculture. It is worth mentioning the fact that, mainly due to the reduction of the gap in the providing of fixed assets per person employed in agriculture and industry (from 1:5.4 in 1950 to 1:3.8 in 1978), the gap in labor productivity (expressed by the national income produced per employed person) fell from 1:8.9 in 1950 to 1:3.8 in 1978. This evolution of the gaps brings out two conclusions of great economic significance: a) the much higher economic efficiency of growth in the technical equipping of agricultural labor, which is causing a much faster increase in its productivity; and b) the big reserves that agriculture has for increasing national income by raising the level of technical equipping of labor. It must be taken into account that in the developed countries the technical equipping of agricultural labor is near or even higher (if the value of agriculture's main fixed asset -- the land -- is also included) than that of industrial labor. Undoubtedly, the transformation of the 155 billion lei provided for investments in agriculture in the 1981-1985 five-year period into new fixed assets (of high yield and efficiency), under the conditions of an absolute and relative reduction of the population employed in agriculture, will cause a faster increase in the technical equipping and productivity of agricultural labor and will contribute to the growth of the total and per capita national income produced in agriculture. As a matter

of fact, the very objectives established for the yields per hectare or per animal (in 1985), by means of whose level our country will approach very much the countries with an advanced agriculture, constitute a prime foreseeable effect of this evolution.

The implementation of the Directive Program for Economic and Social Development in Territorial Form, within which agriculture occupies a central spot, is facilitating the achievement of the central objective of the 1981-1985 five-year period through the complete, differentiated utilisation of the reserves for agricultural production in certain counties, reserves partially neglected thus far. In comparison with the national average, much higher targets for growth in agricultural production (up to twice it) are provided for 12 counties of the country, so that, through a better territorial balance in agricultural development, a minimum annual value of 10,000 lei per capita for productive activity in agriculture (with a national average of 11,500 lei) will be reached in all counties of the country. As a result, in comparison with 23 counties that will still obtain less than 10,000 lei of agricultural production in 1980, 9 counties will obtain more than 15,000 lei in 1985.

The utilization of the second reserve for growth in the national income created in agriculture—namely, the reduction (of the percentage) of material expenditures—seems much more laborious, due to the complexity of the measures that it presupposes. The importance of the problem is given by the unreasonably high percentage itself (sometimes temporarily increasing) that these expenditures have in the social product in agriculture (51.9 percent in 1978). At the same time, under the conditions of the predominance of the measures for a relative reduction of material expenditures, the role of the absolute reduction of them cannot be neglected. A decrease of only 2 percent in the respective percentage (which would thus represent only 50 percent of the value of the agricultural gross output, a percentage still considered high on a world level) would mean a rise in national income by nearly 2.6 billion lei per year (at the gross output in 1978).

The main problem—with a dominant character even, since it affects both the growth of production and the reduction of material expenditures—is the creation of new plants with a higher efficiency of conversion of solar energy, an activity by means of which agriculture fulfills an economic and social function that is not in the powers of any other branch of material production. It is a question not only of also proportioning the branches of vegetable production in accordance with the capacity to accumulate solar energy but also, in addition, of creating new varieties and hybrids with a higher coefficient of conversion of solar energy, a field in which the agricultural scientific research in our country is still indebted to production. The solution of this problem for the basic crops of Romanian agriculture (corn, wheat, sunflowers, soybeans and so on) would have an extremely great importance. It is clear that in such a solution, for the same energy consumption in the form of means of production, there would occur a bigger accumulation of energy in higher outputs, which would lead

to a faster rise in agricultural labor productivity and, implicitly, in the national income produced in agriculture.

The speedup of the process of intensive development of agriculture, on a basis of new investments, is leading to the growth of the value of the fixed assets that, by means of amortisation, are included in the material expenditures of agriculture. Hence, the great significance of increasing the gross and net output per 1,000 lei of fixed assets, so that the same amortization would be allotted to a bigger volume of agricultural gross output. The lack of normative indicators (at the level of the five-year period) for agriculture in this direction (for industry they are established at 1,800 lei of gross output per 1,000 lei of fixed assets) obliges us to a few preliminary judgments. We feel that for agriculture, where a good part of the fixed assets have a seasonal utilization (tractors, machinery, irrigation installations, but also plantations and breeding stock), the economic efficiency of their utilization can be lower (it being concretized in a lower gross and net output per 1,000 lei of fixed assets) than in industry. As a matter of fact, in 1978 these indicators were 1,195 lei in industry and only 729 lei in agriculture. From this there results the great acuteness of increasing the efficiency of the utilization of the fixed assets in agriculture, both by more rapidly increasing the percentage of active fixed assets (tractors, machinery, installations, plantations and breeding stock) -- that is, those that participate directly in the creation of new value -- and by more intensively using all the fixed assets.

The fester process of intensification of agricultural production is also causing an increase in the consumption of chemical fertilizer, especially under the conditions in which we are still far from the specific consumptions in the developed countries. However, under the conditions of the energy crisis, chemical fertilizer is becoming a more and more rare and costly production factor, it being able to eventually constitute a limiting factor in the intensification of agriculture. Consequently, along with creating new varieties of plants and devising new technologies that better utilize the consumption of chemical fertilizer, we must seriously pose ourselves the problem of finding substitutes for chemical fertilizer. Pointing out, in passing, the role of a rational crop rotation in economizing on the consumption of fertilizer per hectare, the wide-scale use of bacteria that fix nitrogen in the soil is of extremely great significance -- in the agriculture of a country whose crop structure causes a high consumption of nitrogen. Thus far, agricultural production has been familiar with such bacteria only for leguminous plants (hence too their role and place in the crop rotation). At the present time, however, the scientific research on a world level has managed to also bring out bacteria that fix nitrogen in the soil for spiked cereals. The use of this procedure on the approximately 3.1 billion hectares occupied by spiked cereals in our country would have great efficiency, judged both by means of the reduction of the expenses for nitrogenous fertiliser and by means of the significant increase in production for the crops that follow in the rotation. The creation of

new forms of plants, capable of fixing atmospheric nitrogen, would be of exceptional economic significance for pomiculture and viticulture, usually placed on land with low fertility.

The expenses for fodder have the highest percentage in the structure of the material expenditures in Romanian agriculture-even under the conditions in which sootechny has not become a leading sector. Even if the coefficient of conversion of energy of vegetable origin into energy of animal origin is one of the lowest in the agricultural and food chain, this means not that the role of sootechny in a modern agricultural economy must be diminished (given the leading role of animal protein in the physical, mental and intellectual development of man) but the finding of the ways and means to increase the efficiency of fodder consumption. The creation of new breeds of animals with a higher coefficient of conversion of fodder consumption conatitutes the main means. Such an orientation is of great topicality in our scatechny, characterised by high specific consumptions of fodder, a consequence of the low potential of yield of some breeds of production animals. It must be pointed out that the respective orientation is pointless if, at the same time, the feeding conditions (especially from the viewpoint of protein balance) and those for tending the animals are not improved.

Absolute reductions in the energy consumption in agriculture can be produced both by improving the tractors and agricultural machinery and equipment and by replacing fossil energy with other, cheaper and inexhaustible sources of energy, such as solar energy and geothermal energy (for hothermass and the drying of produce), wind energy and biogas.

The reserves for increasing the national income produced in agriculture by reducing the material expenditures are notable and their utilization is much more complex, also with some contradictory tendencies, than that outlined earlier.

Nevertheless, it would be simplistic if we were to reduce agriculture's contribution to Romania's transformation into a country with an average level of economic development just to its direct contribution to the growth of national income. By means of the many functions that it fulfills in the national economy, agriculture is creating new possibilities—of a quantitative and qualitative order—of modernization of the Romanian economy. As a supplier of raw materials for the processing industry, agriculture also has an indirect contribution to the growth of national income, since the better utilization of these raw materials, through the inclusion of new realtingents of workers in the production process, is achieved with an addition of newly created value. Following the natural circuit of consumer goods, these products, having become commodities, add further new value, through transportation and storage. This is a main factor that requires a salameed structure of the national economy, which would facilitate its modernization at the level of the most advanced developed economies.

an analysis of the main function of agriculture—that of a supplier of food

size of the per capita national income (regardless of the branches from which it comes) is important, but the way in which national income is utilized is also no less important. The existence of a modern agriculture, capable of completely meeting the food consumption needs of the population, on the basis of scientifically substantiated standards, is a basic condition for a complete circuit of the new created value on a national plane. The growth of agricultural production to proportions that, in 1985, will provide an improvement in the structure and a qualitative improvement in the products, providing for the supplying of the population with products with a high nutritive content and in a diversified assortment, not only is achieving big savings in the country's valuta funds but also, at the same time. is protecting the country from the fluctuations on the world market. under the conditions of a lengthy food crisis. Moreover, through the exportation of agricultural and food products and raw materials. agriculture is attracting from abroad new and significant resources for economic growth, whose contribution to the modernisation of the national economy is by no means negligible.

Under our country's conditions, agriculture is still inseparable from the village. Agriculture's progress means implicitly the flourishing of the contemporary Romanian village, its rise to higher levels of socialist civilization and well-being, an integral part of the process of attainment of an average level of development by our country. The faster rise in the incomes of the peasantry is permitting the improvement of its living conditions, including through the making of investments aimed at the urban and social-administrative transformation of the villages, a large number of which are acquiring more and more the appearance of cities. As a result, next year, another 140 communal centers will be transformed into agroindustrial cities, and over 700 production units with an industrial character, of national and local interest, will be achieved in the localities of residence of the combined agroindustrial councils. All these elements of a de deep social and economic transformation of the village come to complete the characteristic picture of a socialist country with an average level of economic development.

It is the historical merit of the Romanian Communist Party and its secretary general, Comrade Nicolae Ceausescu, that, starting from these many and extremely topical functions of agriculture in Romania's transformation into a country with an average level of economic development, they have proclaimed agriculture—along with energy and the base of raw materials—as a main priority of the economic and social development of the country in the next five-year period. Thus, the 12th RCP Congress has approved an important thesis for the contemporary thought of scientific socialism, by means of which agriculture is raised to the rightful rank in a modern socialist economy.

## WAYS OF INCREASING HYDROPOWER POTENTIAL STUDIED

Bucharest REVISTA ECONOMICA in Romanian No 2, 11 Jan 80 pp 6-7

Article by Dumitru Spiridon and Silviu Bogdan, Institute of Hydrotechnical Studies and Design: "General Use of Watercourses Important to Meet the Energy Requirement"

Text The rapid development of the Romanian economy, its further modernization and the growing emphasis upon effectiveness and competitive power require better exploitation of domestic resources of energy and raw materials, as it was quite clearly pointed out at the 12th Party Congress. Like other components of the natural environment (the soil, air, biosphere etc.) the nydraulic resources are an important part of the national wealth and are expected to support socioeconomic development on many levels. Use of the nydropower potential of the watercourses on our national territory is a primary field of exploitation and an important means of meeting the electric power requirement in the next five-year plan and beyond. Meanwhile the hydrologic resources are in growing demand to supply the public and the various industrial units with water, and they are also a basic factor in agricultural activity.

The extensive possiblities for use of these resources (but a use limited by the existing natural conditions), the heavy material, financial and manpower outlays required to build the various capacities in this sector, and the need of correct evaluation of the long-range effects of these interventions of man upon physical and economic geography of the various areas have made multiple functions with maximum economic effectiveness a basic criterion in designing hydrotechnical installations. To this end, the National Long-Range Program for Improving the Hydrographic Basins of the Romanian Socialist Republic specified construction of reservoirs and other comprehensive projects essential to the complete regulation of the nation's waters in correlation with the particular projects of the various sectors of the national economy on the basis of uniform modern designs providing for the demands for water, complete use of the hydropower potential, regulation of watercourses and discharges, protection against floods and control of soil erosion. In view of the importance of a uniform plan for exploiting all the advantages this bountiful

natural resource offers the national economy, we shall try in this study to point out new possibilities of enhancing the effectiveness of hydrotechnical installations by providing for multiple functions and by correlating the plans and projects for which only partial uses such as energy, regulation or supply are often specified in practice.

# Regulable Technical Potential

We all realize the importance and role of hydroelectric power in providing for energy resources in keeping with the growth rate of the national economy. To this end the Directive-Program of Research and Development in the Energy Field for the 1981-1990 Period and Main Objectives up to the Year 2000 specifies that the proportion of hydroelectric power in the electric power production structure will be raised from 17.6 percent in 1980 to 20 percent in 1985 and to 24 percent in 1979 /sic/ while the use of the national hydropower potential will be steadily increased from about 30 percent in 1980 to 45 percent in 1985 and to 65 percent in 1990. It also calls for complete exploitation of Romania's hydropower potential by the end of the century.

In order to determine the regulable technical potential a particular effort was made to implement comprehensive projects on riverbeds and to make better use of the hydropower potential by improving some major hydroelectric power stations with large reservoir lakes and proportioned as peak and emergency power stations in the mountain area of each hydrographic basin. (On the bassis of the plans for improving the respective power stations the regulable technical potential was evaluated at about 38 TWh per year.) In the mountain areas it was planned to determine the regulable technical potential particularly by building large reservoirs with multiple functions and by concentrating the discharges and waterfalls in peak hydroelectric power stations with capacities of 100-500 MW, and also by including the reservoirs specified in the outline plans for overall improvement in the hydropower plans. In the hill and plain areas the effort was made to enhance the regulable technical potential by building hydroelectric power stations on the large rivers on rapids, with dams with large reservoirs specified in their plans (on the Olt, Arges, Siret, Mures etc.), in the sectors with favorable conditions for regulating the discharges for irrigation. It was also planned to outfit hydroelectric power stations to use the waterfalls that will be created by dams by constructing branches designed for water supply.

As for complete improvement of the Danube, the rationalization studies are intended to develop measures permitting overall use of the river for power engineering and navigation and use of some basins to protect the agricultural lands of the meadow from floods and to form water reserves for irrigation.

The value of the regulable technical potential, estimated as we said at about 38 Twh per year, corresponds to 855 hydroelectric power stations with a total installed power of about 13,000 MW and a useful volume of reservoirs of about 20 billion cubic meters (Table 1 shows the distribution by areas).

Table 1. Distribution of Improvements by Areas

51	Nr. de centrale hidro- electrice (CHE)	Puters lustellati (MW)	Prinduc- lia de operale (GWh/an)	Volumul util al lacuritor de Lacumulare (mil. mo)
Amenaiari pe riuri interioare	830	10 700	25 700	17 500
- CHE din zonele de munte	490	7 330	16 990	F 800
de dral și cimpie Amenajări tiuviale pe Dunăre	360	2 400 2 300	9 800 11 300	7 700 2 500

- 1. Number of hydroelectric power stations (CHE)
- 2. Installed power (MW)
- 3. Power output (GWh per year)
- h. Useful volume of reservoir lakes (millions of cubic meters)
- 5. Improvements on inland rivers:

  -CHE in mountain areas

  -CHE in hill and plain areas
  Riverine improvements on the
  Damube

# Importance of Overall Improvement Projects

Great possibilities for enhancing the regulable technical potential are also afforded by better correlation of the plans for hydropower improvement with other projects for various uses of watercourses and with the actions to regulate riverbeds specified in the National Long-Range Program for Improving Hydrographic Basins. For this purpose it is intended to equip hydroelectric power stations to use the waterfalls that will be created by construction of multipurpose reservoirs and were not included in the hydropower plans, to expand improvement of hydroelectric power stations on rapids on all the main rivers or where projects are planned for regulating, banking or deepeming the beds, to equip such power stations to use the waterfalls that can be created on the multipurpose branches planned between the basins with surpluses and those with shortages, and improvement of small power stations by use of the existing hydrotechnical constructions and those planned for various purposes and by use of the potential of the watercourses in the areas above the hydrographic basins.

On the whole and in view of all these possibilities, it is estimated that the value of the regulable technical potential can be increased by about 4-6 TWh per year, and that the total value of Romania's regulable technical hydropower potential will be increased from about 38 TWh per year to about 42-44 TWh per year.

Comprehensive hydrotechnical improvements must be implemented to meet the various consumers! water requirements, for protection against floods, and to regulate and make full use of the power potential of the watercourses. In the mountain areas, where the rivers in an average year contain about 2h billion cubic meters of water and reservoirs with a national average

accumulation coefficients of about 0.65 would be necessary to regulate them, it is essential to construct reservoirs with a total useful volume of about 11,-16 billion cubic meters, including about 4-6 billion additional cubic meters above the levels specified in the plans for improving the hydroelectric power stations so that the discharges of all watercourses in the mountain area can be regulated.

For better correlation of the hydropower projects with the overall hydrotechnical improvements planned for the watercourses in the mountain area, we consider the following chiefly necessary:

- a. More efficient power exploitation of the multipurpose reservoirs by determining the volume of the reservoir lake within the economic limits permitted by the terrain conditions in order to form supplementary reserves for power necessities;
- b. Proportioning of the volumes of the reservoir lakes specified in the plans of hydroelectric power stations within the limits necessary to regulate the discharges for multiple uses and to attenuate the freshets, in view of the possibilities of constructing secondary intakes and catchments to increase the regulated discharges;
- c. Study of the possibilities of improving major hydroelectric power stations in all hydrographic basins with large, multipurpose reservoirs;
- d. Provision for reservoirs with volumes corresponding to the pertinent reception basins at all hydroelectric power stations with favorable conditions, in order to help regulate the discharges essential to the multiple uses downstream, and expansion of the plans of power stations in the areas above the watercourses, especially those with a potential less than 200 kw per km;
- e. Preparation of plans to improve hydroelectric power stations connected with multipurpose reservoirs and branches in order to transfer discharges from the hydrographic basins with surpluses to those with shortages;
- f. Efficient power exploitation of the waterfalls at the intake dams for water supply and of the falls that can be created on branches up to the centers of consumption;
- g. Improvement of power stations or small power stations for use of water-falls in connection with regulating the watercourses (abatement dams, thresh-holds, unloading canals, etc.), streams and torrential formations.

In the hill and plain areas the hydropower potential can be used to a great extent by correlating projects for varied purposes, including multipurpose reservoir dams, regulating and embanking more important watercourses, improving navigable routes and gravel pits /balastiere/, branch and intake channels for irrigation and other uses. The reservoir lakes planned in these areas are to provide the discharges needed for irrigation and help effectively to attemate the freshets that originate in the basins downstream from the watercourses descending from the mountain area. (The total useful volume of these reservoirs is estimated at about 8-10 billion cubic meters and

<sup>\*</sup>Ratio between the reservoir lake's volume and that of the average annual water reserve for the respective section.

corresponds to an average accumulation coefficient of 0.7-0.6).

In the course of correlating the power projects with those for multiple uses it is necessary to update and expand the plans for improvements on medium and small rapids (h0-6 meters) with reservoir or upper water dams or with channels, on all important watercourses including their lower sectors with potentials below 200 kw per km, and to correlate construction of hydroelectric power stations on rapids with the comprehensive projects planned to regulate rivers, to protect against floods, to create navigable channels, to exploit the gravel, and to deepen the riverbeds downstream from dams. We should also point out that construction of large reservoirs in the hill and plain area can have unfavorable economic effects by withdrawing large agricultural areas from productive use and displacing communities. To prevent such consequences it is necessary to reduce the volumes of reservoirs involving major losses and to compensate for the difference in volume of water by improving the reservoir lakes in the sectors with favorable conditions.

# Comprehensive Exploitation of Reservoir Lakes

The reservoir lakes intended for water management for all uses present a particularly important aspect of multipurpose hydrotechnical projects. It is a well-known fact that the inland rivers of Romania contain a relatively limited volume of water (an average annual content of 37 billion cubic meters) and have a variable flow system and an uneven geographic distribution. Yet the consumers' water requirements increase with development of economic sectors and urban and rural communities, and furthermore water consumption will show major increases in the future. For example, the demand on the public water supply is expected to increase from 21 cubic meters per second in 1975 to 100 cubic meters per second in 1990 and to 160 (about 5 billion cubic meters) in the long range. The water supply of industry and the agrozootechnical complexes will increase consumption from about 170 cubic meters per second in 1975 to 100 in 1990 and to 540 cubic meters per second (about 17 billion cubic meters) in the long range, according to the provisions of the National Program for Improvement of Hydrographic Basins.

About 80 percent of the necessary volume of water (178 billion cubic meters a year) will come from the inland rivers and the rest from the Danube. But it is estimated that the volume of water needed to irrigate 5.1 million hectares in 1990 will be about 19 billion cubic meters in an average year and about 24 billion cubic meters in dry years, so that the total water supply for an average year will show major increases over the 1975 figures (Table 2)

### Table 2

	1975	1990
Total water demand (billions of cu m) -Unrecoverable consumption in above	14.4	35 25.6

These circumstances call for measures to secure the resources essential to the water supplies. It is first necessary to retain the big discharges in the spring months and the freshets to fill the reservoir lakes and compensate for the discharges in the dry months.

Exploitation of this potential requires a number of projects, especially to regulate the river discharges to meet the power needs and other uses, so that the average monthly discharges in years of drought will not drop below 50 percent of the average multiannual discharge. This will permit both electric power production and coverage of the water requirements of industry and the public, use of portions of the volumes of reservoirs for irrigation within the acceptable limits for the other uses, and superannual regulation of the discharges especially with the aid of the large reservoirs of the hydroelectric power stations.

In the hill and plain areas the improved hydroelectric power stations on the rapids on the big rivers and the water consumers will use the discharges regulated upstream and those of the tributaries along the way. The reservoir lakes planned in these areas together with those of the hydroelectric power stations on rapids, the total volume of which will amount to about 8-10 cubic meters, are to be exploited so that filling them by June of each year will cover the water requirements for irrigation. Analysis of the alternatives for multiple use of the hydrologic potential shows that the particular requirements for each use must be considered, which requirements can be harmonized but are contradictory. For example all uses require the big discharges in the spring months and the freshets to be retained in the reservoir lakes. And the constant annual system of water requirements for the public and industry can be correlated with the system of use of water by the hydroelectric power stations, and the greater demands in the winter months are covered by means of the reservoir lakes. But the system of water consumption for irrimation, being concentrated especially in 2-3 months of summer, conflicts with the one necessay for the other uses, especially in years of drought, years when the differences will be made up out of the Danube.

We feel the factors analyzed in this article have shown the importance of providing for multiple functions of all hydrotechnical projects, both those that will be constructed in the future and the already existing ones. The next step is to determine, for each specific situation, the optimal solution that will harmonize the diverse uses of the water discharges by the criterion of maximum economic effectiveness with consideration of the long-range effects such improvements have upon the environment and upon the development of each area.

## OTHER REPUBLICS BUILD PROJECTS IN KOSOVO

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 2 Apr 80 p 6

[Text] At a conference held 19 March in the Yugoslav Economic Chamber resolutions were adopted on implementation of the agreement among the republics and the SAP [Socialist Autonomous Province] Vojvodina on assumption of commitments to build economic projects in SAP Kosovo in 1980 and the coming medium-term period. On that occasion representatives of economic chambers and organizations of associated labor expressed a readiness to contribute to Kosovo's faster development by conclusion of direct agreements among OUR's [organization of associated labor] and by pooling labor and capital.

SR [Socialist Republic] Serbia. Important among the finished projects for cooperation with OUR's in SAP Kosovo is the program of the Gosa Industry of Smederevska Palanka to build a forging shop in Podujevo (cost of the project about 607 million dinars; plans call for the new forging shop to employ 630 workers and to commence operation in 2 years). Also worthy of attention are the projects for cooperation between the Crvena Zastava plants of Kragujevac with the Fabrika Armature [fittings factory] of Pristina, and also certain programs of Prva Iskra of Baric, MIN (Machine Industry) of Nis, a component of SOUR [complex organization of associated labor] Minel of Belgrade, and of RO [work organization] Takovo of Gornji Milanovac and of other OUR's.

SR Slovenia. SOUR Emona wishes to invest funds in Kosovo to establish vine-yards, cattle- and poultry-raising operations, fish ponds and freezer plants. The factory Lek of Ljubljana will continue cooperation with Farma-kos in building bismuth salt facilities in Prizren. The Heating Appliance Factory of Ribnica has offered to build a foundry in Djakovica, Izolirka of Ljubljana to build a plant in Decani, and TAM of Maribor to set up several vehicle service centers. Lesnina of Ljubljana intends to cooperate with Kosodrvo of Pristina in building a furniture factory, and Prebold Textile Industry to finance construction of a raw fiber factory in Srbica. There is a program of Cimos of Koper to build a shock-absorber plant, while Hidromontaza of Maribor would set up an OUR for assembly, and Slovin of Ljubljana would join with Agrokosovo of Pristina in establishing about 1,100 hectares of large-scale vineyards.

So far a self-management accord has been signed between Gorenje of Verrie and Djakovica concerning the production of motors and an agreement on cooperation between EGS of Maribor and the Thermal Electric Power Plant of Kosovo on paying off loans to build a thermal electric power plant with a capacity of 100 megawatts of power. Negotiations are being conducted for Zlatarna of Celje to engage in specialized production in Prizren on an income-sharing basis. IMP of Ljubljana has also proposed to Elektrokosovo of Pristina production of substations and power transmission equipment. Representatives of Aero of Celje are conducting talks about building some of their own plants to meet the needs of the publishing industry in Kosovo.

SR Bosnia-Hercegovina. Preparations are under way about the Mining and Metallurgical Combine of Zenica building in Kosovo a factory which would produce about 40,000 tons of reinforcing steel, mesh and lattice girders a year, employing a work force of 400. Energoinvest of Sarajevo is negotiating about expanding its electrical equipment factory in Pristina and building a factory for assembly of processing and electrical equipment, while Elektrobosna of Jajce is in talks concerning construction of a ferrosilicon and metallic silicon factory in Kosovska Mitrovica. Specialists of Vatrostalna in Zenica are with representatives of the OUR's Feronikl and Trepca on the possibility of setting up a new work unit which would later grow to become an OUR and would perform analogous operations in Kosovo within Vatrostalna's program.

SR Croatia. A program has been adopted by Djuro Djakovic of Slavonski Brod to manufacture steel balls in Pristina for ball mills (output 10,000 tons annually), which would substitute for these products, which are now being imported. The SOUR Podravka of Koprivnica is to join with Farmakos in building a joint plant in Prizren to manufacture special soaps which are not made in the country. Possibilities for carrying out five joint programs in SAP Kosovo are being examined with Agrokosovo. The SOUR Steam Boiler Factory of Zagreb will engage in business and technical cooperation in Prizren through its contribution to see that the facilities for power equipment now under construction are as efficient as possible. Preparations have begun in the SOUR Jugoturbina of Karlovac to find a program within its own production which would also be attractive to Kosovo economy.

SR Montenegro. For the present the possibility has been envisaged of carrying out several joint investment programs to build economic projects in SAP Kosovo in 1980 and the coming medium-term period. The 13 July Agricultural Combine in Titograd, for example, is interested in producing certain products which are now scarce and also in building or modernizing facilities in the food processing industry. The Crna Gora Timbering and Industrial Combine could participate in joint construction of facilities to mandacture cardboard (plywood, medijapan and panelboard) and to make furniture and interior equipment, as well as in building a factory to make fine oriental furniture from common beechwood. Obod of Cetinje is interested in carrying out one project, for example, for external lighting or small appliances, and so on.

SAP Vojvodina. Sever of Subotica and the Djakovica Motor Factory are to open a new foundry. SOUR Naftagas of Novi Sad intends to join an OUR from Kosovo in building a bentonite mill, and the SOUR Servo Mihalj of Zrenjanin intends to set up a subsidiary to build a chemical factory to make salicylic acid.

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## DINAR EXCHANGE RATE FOR CALCULATING IMPORT/EXPORT FEES

Belgrade SLUZBENI LIST SFRJ in Serbo-Croatian No 15, 28 Mar 80 pp 490-491

[Order issued by the Federal Executive Council on 27 March 1980 and signed by its vice chairman, Dragoljub Stavrev]

[Text] On the basis of Article 50 of the Law on Foreign Exchange Transactions and Credit Relations With Foreign Countries (SLUZBENI LIST SFRJ, No 15, 1977) and Article 39, Paragraph 2, of the Customs Law (SLUZBENI LIST SFRJ, No 10, 1976; No 36, 1979; and No 52, 1979), the Federal Executive Council issues the following

#### ORDER

On Establishing Rates of Exchange of Foreign Currencies for Determining the Base for Computation of Customs Duties and Other Import Charges, for Computation of Tax Deductions Related to Exports and for Denomination of Rights

To Import and To Make Payments

1. The following rates of exchange are hereby set for purposes of determining the base for computation of customs duties and other import charges, for computation of tax deductions related to exports and for denomination of rights to import and to make payments:

Currency	Dinars	
1 U.S. dollar (U.S. \$)	20.10	
100 Austrian shillings (Asch)	159.20	
100 Belgian francs (Bfr)	70.30	
100 Danish krone (Dkr)	363.90	
1 English pound (Lstg)	45.60	
100 French francs (FF)	487.20	
100 Dutch guilder (Hf1)	1,034.00	
100 Italian lira (Lit)	2.40	
1 Canadian dollar (Can \$)	17.50	
100 West German marks (DM)	1,139.00	
100 Norwegian krone (Nkr)	411.60	
100 Swiss francs (Sfr)	1,191.90	

Currency		Dinars	
100	Swedish kronas (Skr)	479.70	
100	Finnish marks (Fmk)	537.20	
100	Japanese yen (Yen)	8.10	
100	Spanish pesetas (Pz)	29.90	
1	Kuwait dinar (Kuv dinar)	73.20	
1	Iraqui dinar (Ir dinar)	67.80	
1	Australian dollar	22.20	
100	drachmas	48.90	

- 2. On the date when this order is put into effect, the Order Establishing Rates of Exchange of Foreign Countries for Determination of the Base for Computation of Customs Duties and Other Import Charges, for Computation of Tax Deductions Related to Exports and for Denomination of Rights To Import and To Make Payments, as Well as for Statistical Purposes (SLUZBENI LIST SFRJ, No 38, 1979), except for the provisions of Point 1 of that order, which pertains to establishing rates of exchange of foreign currencies for statistical purposes, shall cease to be valid.
- 3. This order shall be put into effect on 1 April 1980.
- 4. This order shall take effect on the day after publication in SLUZBENI LIST SFRJ.

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## SLAVONIA-BARANJA AREA INCREASES FARMLAND

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 2 Apr 80 p 5

[Article by V. Petrovic: "Stable Production Through Improvement of Land"]

[Text] By 1985 Another 78,000 Hectares Will Be Made Fit for Stable Production. Total Investments Are Estimated at 3,005,000,000 Dinars.

Though not without certain difficulties, above all difficulties of a financial nature, improvement of land in the socialized sector of agriculture in Slavonia and Baranja has been proceeding rather successfully. During the current medium-term period, including as well projects which will be completed this year, agricultural organizations in Slavonia and Baranja will improve 89,987 hectares, including 18,000 hectares on which there will be complete drainage achieved by laying plastic pipe to drain off surplus water into the network of canals that has already been built. Together with projects completed in previous years, socialized agriculture will by the end of this year have nearly 60 percent of the plowland suitable for high stable plant production even under the most unfavorable weather conditions.

In saying this we must be mindful that up until 5 or 6 years ago most of the land owned by the socialized sector, and this is also the case with private holdings, was unsuitable for production under all weather conditions. Often it was enough for rainfall to be just on the heavy side for large areas to be inaccessible for cultivation for days or cultivation would require exceptional efforts, major breakdowns and broken machines. One should only recall that over the last 10 years or so the Slavonia-Baranja area has been hit on three occasions by heavy rainfall which aside from the floods inflicted losses on agriculture running into several hundreds of millions of dinars. After all, present-day field cropping, at least in the case of the socialized sector, is unimaginable without complete improvement of the land, since use of the most recent agrotechnical advances necessitate investment of large amounts of money. Grain production cannot even be conceived without investing at least 20,000 dinars per hectare, and it is quite understandable that at this high cost level every dropoff of production means financial ruin for the producers.

## Obtaining Funds

That is precisely why the work that has been done to improve the land will be continued in years to come. By 1985 577 km of main canals will be built and 2,517 km of drainage ditches cut, meaning another 78,000 hectares made fit for stable production. At the same time drainage pipe will be laid on 36,790 hectares and 6,390 hectares equipped for irrigation.

This entire undertaking, which will be part of the program for development of the agroindustrial complex in the coming medium-term period, will require investment of 3,005,000,000 dinars on the basis of last year's prices (1979). On the average slightly more than 25,000 dinars would have to be invested in each hectare for reclamation, drainage and irrigation. According to the plans of agricultural organizations used as the basis for compiling this program, 26.9 percent of the funds needed would be supplied from their own funds, while the remainder would be obtained from other sources, primarily from bank credits and other participants in carrying out the work.

It must be said, however, that certain organizations will really have difficulties in finding the necessary funds both those of their own and those to be obtained elsewhere. Most of these organizations have already obtained funds in advance which in coming years they will set aside to expand the material base of their operation, and it should be said that in the coming medium-term period there will also be investments in other development programs. Since the fulfillment of these programs—we will mention only investment of 900 million dinars to develop animal husbandry and meat processing—will be based mostly on the use of borrowed money, it is realistic to conclude that most of the organizations will truly have great difficulties in obtaining the funds for improvement of the land in good time and on good terms and conditions.

## Income Per Hectare Is Rising

In view of the fact that profitable and stable production is unthinkable unless the land is improved, farm operators in Slavonia and Baranja feel that the community, as part of the campaign to increase food production, must establish more favorable terms and conditions for extension of credit for these purposes. Though at first it seems that substantial funds are involved, they are actually small, since in 4 or 5 years these organizations lose nearly that amount because the land has not been improved. Agricultural specialists have calculated that after the land is entirely improved average wheat production can be raised another 10 quintals per hectare, which, at the average price of only 4.5 dinars, represents an increased income of 4,500 dinars on every hectare. Since approximately the same proportions also apply in production of the other grains and industrial crops. it is quite clear why farm operators in Slavonia and Baranja are aiming to increase their income through large-scale improvement of the land, but this also means providing the community a larger amount of food to meet domestic needs and to increase exports.

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## ACHIEVEMENTS, PROBLEMS IN FARM ASSOCIATING DISCUSSED

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 9 Apr 80 p 8

[Excerpts] In 1979 324 new organizations of associated farmers were formed, bringing the total number of associated farms to: 525 cooperatives, 191 basic cooperative organizations, 907 basic organizations of cooperators, and 383 basic organizations for cooperation, or a total of 2006, compared to 1682 in 1978. Commenting on these facts, members of the Assembly of the Yugoslav [Farm] Cooperative Council declared at a meeting, chaired by Stojan Milenkovic, that the network of cooperative organizations is clearly expanding but progress still does not correspond to the needs and possibilities. At the end of 1978, 249,923 farmers were registered as being associated [in some form]. In addition, there were about 1 million cooperators [private farmers cooperating with cooperatives] (533,000 in crop production and 442,000 in livestock production). At the end of 1979, there were about 225,000 associated farmers, or 10 percent fewer than in 1978, but the number of cooperators increased. On the basis of this, it was asserted that the number of [private] farmers cooperating with the socialized sector increased by about 32,000 or 1 percent.

By developing the cooperative movement, a more favorable climate is also created for pension and health insurance for farmers. In 1978 18,768 farmers had such insurance, while in 1979 there were many more, namely, 84,727. Favorable conditions for pension and health insurance are a special reason for farmers to be associated.

Criticism was made of the practice of narrowly interpreting the concept of associated farmer, reducing him to a worker in associated labor; as a result of this, expansion of the cooperative movement has been slowed. This is a manifestation of sectarianism which has been criticized also in the SAWP.

The assembly declared that great production reserves exist if associating is speeded up, because the private sector is still lagging considerably behind the socialized sector in production results. The socialized sector produces one-quarter more in wheat yellds and 40 percent more in corn yields. Great differences also exist in sugar beet and sunflower yields.

Wheat yields in the private sector in Bosnia-Hercegovina are 54 percent lower than in the socialized sector, while they are 51 percent lower in Croatia, but only 17 percent lower in Vojvodina. Milk production per cow is 73 percent less (1200 liters compared to 4449 liters in the socialized sector.) This is the country average; the differences in some republics are even greater.

The private sector has more than 92 percent of the available cattle but accounts for only 78 percent of the production of beef meat, it has 92 percent of the sows but accounts for only 78 percent of the meat produced from pigs, has 80 percent of the poultry but produces only 67 percent of the poultry meat. From this one sees how much strengthening the movement toward farm associating which, through cooperating with the socialized sector, would promote production based on modern technology and optimum investments) would contribute toward increasing the production of food and exports.

The assembly advocated a more persistent struggle against barriers to associating and supported the expansion of links between private farmers and food-processing industries. The tobacco industry has a satisfactory number of cooperators, as have sugar mills and edible oil plants, but this is not the case in the beverage industry, grain processing organizations, dairies and slaughterhouses which have to do more to develop cooperation with private producers.

## BRIEFS

BOSNIA-HERCEGOVINA RETURNEES--In the last 6 years about 45,000 workers employed abroad from Bosnia-Hercegovina returned; this tendency is continuing. For instance in the first 11 months of 1979 about 2700 workers returned to their homes and registered with the employment office. Of this number 900 found jobs in the socialized sector of the economy, while the others found work in agriculture and small-scale businesses. At the same time only 938 workers left for work abroad which is far less than in previous years. At the end of 1979 there were about 131,000 workers from Bosnia-Hercegovina working abroad. However, many of them also report that they will soon return to their home towns. [Excerpt] [Belgrade PRIVREDNI PREGLED in Serbo-Croatian 2 Apr 80 p 4]

AIR TRAFFIC -- In 1979 there were 17 airports open for domestic and international air transportation with passengers totaling 5,959,000, according to a report of the Federal Bureau for Statistics. The number of air passengers increased by about 292,000, or 5.15 percent, over the number in 1978 (213,000 more in domestic transportation and 61,000 more in international transportation). Our share in international air transportation has increased, with the number of departing and arriving passengers on foreign airlines reduced by 26,000 compared to 1978. The increase in passenger traffic in 1979 merits attention because it was achieved in a year which was very unfavorable for all air transporters, both foreign and domestic, regular or charter flights. Capacities have been considerably expanded by modernizing airport facilities for receiving and dispatching planes and passengers, and especially by modernizing large planes. But airport operation is very unsatisfactory and the prices of airport services, regardless of the recent increase in prices, cannot continue to cover operating costs and, with the exception of a few of the largest airports, most are operating at a loss. [Excerpt] [Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 3 Mar 80 p 30]

MACEDONIAN RETURNEES—There are now about 30,000 Macedonians working in Western Europe and also 30,000 in countries outside the European continent. Recently 3000 to 4000 workers from the Republic of Macedonia have been returning annually from abroad. It was stressed at a 5 April meeting of the presidium of the governing council of the Federation of Trade Unions of Macedonia that discussions with our workers abroad are very useful, although

they were not being developed with equal success in all opstinas. It was suggested that discussions with our workers abroad be held during the summer when a large number come to Yugoslavia on vacation. Concrete action is needed in all opstinas in further fulfilling the policy on returnees. The lack of satisfactory sites for building housing or opening artisan shops, and other similar "problems" must not be an obstacle to this policy.

[Excerpt] [Belgrade BORBA in Serbo-Croatian 4 Apr 80 p 2]

MARCH PRICE INCREASES -- In March 1980 retail prices increased 25.8 percent compared to March 1979. In this period prices of agricultural products of a seasonal nature increased 28 percent, while prices of industrial products rose 26.6 percent, industrial food products 15.9 percent, and services 22.5 percent. Prices in the first quarter of this year rose 26.2 percent over the same 1979 period, (prices of seasonal agricultural products rose 31.8 percent, industrial products 26.4 percent, and services 23.2 percent). Compared to February, March retail prices increased 1.8 percent; compared to December 1979, they increased by 8 percent. At the end of the first quarter of this year retail prices were 5.6 percent more than in December 1979. As regards the cost of living, in March it was 25.8 percent above that of March 1979. Expenditures for food were 25.4 percent higher, for clothing and footwear 22.8 percent, for housing 26.6 percent, for heating and light 37.2 percent, for transportation and PTT services 44.5 percent higher than in March 1979. The cost of living increased 26.9 percent in the first quarter compared to the first quarter of 1979, with expenditures increasing as indicated (in percentage) for the following: food (27.9), housing (26.2), and transportation/PTT (40). Compared to February, the March cost of living was 1.1 percent higher, while the monthly average in the first quarter of 1980 was 7.6 percent more than in December 1979. [Text] [Belgrade PRIVREDNI PREGLED in Serbo-Croatian 8 Apr 80 p 12]

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